



**Hamazasp
GALSTYAN**

PhD in Economics

In 1989, he graduated from the department of Economic Planning of YerINE (now ASUE). Since 1993 he has worked for about 25 years in the state and local government bodies of the Republic of Armenia. In 2004, Hamazasp received a PhD in Economics. Since 2004 he has been teaching at the RA Academy of Management, the European Regional Academy and at the Armenian Institute of Tourism (a branch of the Russian International Academy of Tourism). Since 2019 he has been a researcher at the Amberd Research Center at ASUE, and is an author of two monographs and more than two dozen scientific and analytical articles.



<https://orcid.org/0000-0001-9014-5892>

GLOBAL TRENDS IN CURRENT AND STATE HEALTH CARE FINANCING

IN UPPER-MIDDLE-INCOME COUNTRIES

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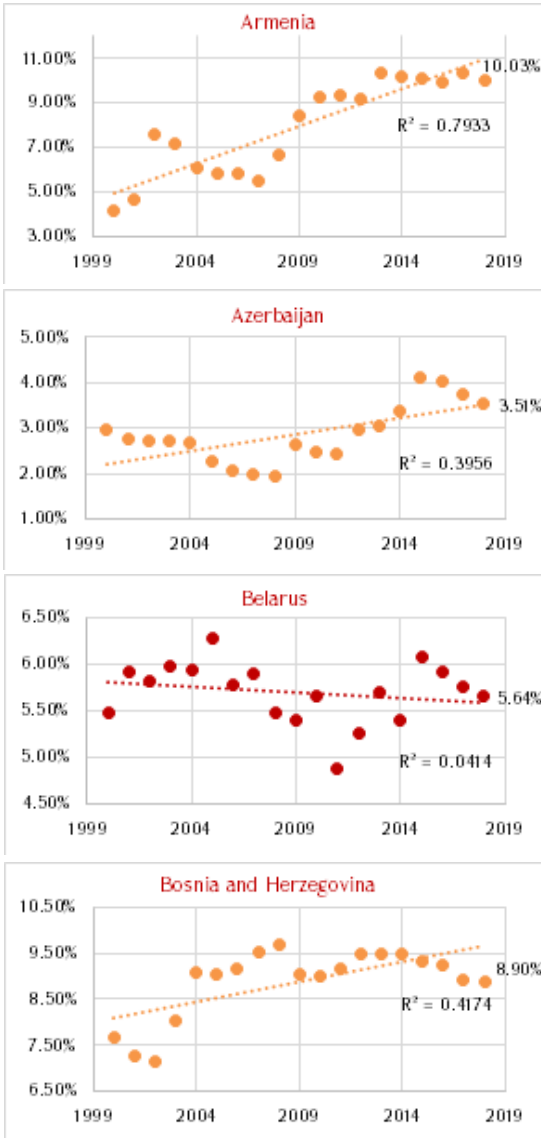
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An essential factor characterizing the social security of the population in any country is the development of the health care system, and one of the key factors determining the above-mentioned development is the financing of the system. The effectiveness of the funding of this system depends on such factors as the structure of the funding, the sources of financing of the elements of that structure, and of course the extent of the state's participation in the financing. With the right design of these factors only, it is possible to achieve the desired result, but in practice, there are rare cases when we have maximum efficiency. And there is a need to identify the main features that hold it back from that desired state. That is why the article tries to reveal the main trends and characteristics of the sector's financing in upper-middle-income countries.

The development of the healthcare system is one of the cornerstones of any country's social development. It is with the development of the healthcare system, that a number of social problems registered in the country can be solved. Moreover, it is through a sustainable health care system that these problems can be prevented. Therefore, the development of the health care system should be at the top of the list of priorities of each government. The possible improvement of the healthcare system is directly related to the funding volumes and mechanisms of that system. Moreover, the observations of the current part of the funding volumes in the conditions of the epidemic, as well as the study of the share of the state participation in it, are fatally imperative.

Naturally, the funding mechanisms of the system differ in countries with different levels of development, and this article attempts to analyze the specifics of this problem in upper-middle-income countries. The classification of countries is based on the approach of the World Bank.¹ In accordance with this classification, the article considers indicators of such countries as Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Georgia, Kazakhstan, Romania, Serbia and Turkey.

The first indicator to be considered is the ratio of the Current Health Expenditure (CHE) and the Gross Domestic Product (GDP), this ratio is presented in Figure 1 for the listed 10 countries.



¹ The official page of the the World Bank, <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>, visited on 01.12.21 9:38 PM



**Gagik
BADADYAN**

PhD Student, ASUE

He graduated with honors from ASUE earning his bachelor's degree in Anti-crisis management, and the Master's degree in Business administration. Now he is a PhD student of the chair of Management of ASUE. In parallel with his studies, he was a member of a research group in the Amberd Research Center. Currently, he is the financial director of "Parvanyan Consulting" LLC, also works as an expert in the financial and economic department of the Ministry of High-Tech Industry of the Republic of Armenia. Author of over 10 scientific articles.

 <https://orcid.org/0000-0001-6026-6204>

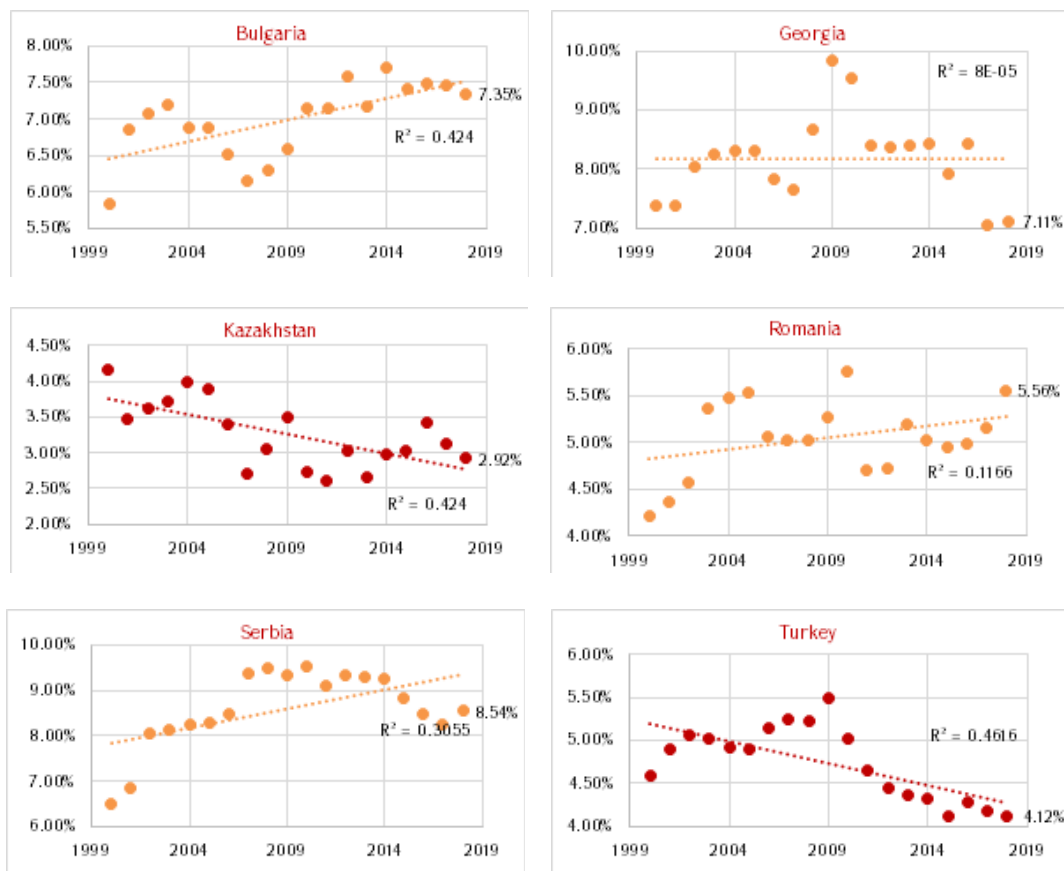


FIGURE 1

Current Health Expenditure (CHE) / Gross Domestic Product (GDP)²

In 2018 in the countries surveyed, the Current Health Expenditure (CHE) / Gross Domestic Product (GDP) ratio fluctuated in the range of 3-10%. In 2018, current health expenditures, compared to GDP, recorded the highest rate in Armenia, where the rate exceeded 10%. About 9% results were recorded in Bosnia and Herzegovina, as well as in Serbia. The three lowest results were registered in Kazakhstan, Azerbaijan and Turkey with the indicators of 2.9%, 3.5% and 4.1%, respectively. It is noteworthy that the higher the value of this ratio, the relatively good the current funding situation in the sector. It is obvious from the presented data

that we have the most desirable situation in Armenia, and the opposite situation is in Kazakhstan, Azerbaijan and Turkey.

In addition to the fact that this indicator should have a relatively high value, it is also important to analyze what the tendency of this ratio to change is. In six of ten countries observed, there is an obvious growth trend, in one case there is an almost zero growth trend (these cases are painted green in Figure 1), and in three countries (Belarus, Kazakhstan, Turkey) the trend has negative inclination (these cases are painted red in Figure 1). As a result, we can conclude that Kazakhstan and Turkey are in the worst state

² The official page of The World Health Organization, <https://apps.who.int/nha/database/Select/Indicators/en>, visited on 01.12.21 9:45 PM

among the observed countries in terms of the current situation and future trends of this ratio.

However, in addition to the trend, it is also important to understand the stability of the changes during the observed period. We have summarized the observations of the stability of changes in the RMSE / average ratio calculations (Table 1).

As we can see, the averages of the series fluctuate in the range of 3-9%. In the case of 9 countries, the average index is quite close to the index of 2018, only in the case of Armenia, the difference between the two indicators is more than 2%. But there are serious problems in terms of stability of changes in indicators. In particular, in the case of Armenia and Azerbaijan, the RMSE

/ average ratio exceeds 20%, which indicates that the trends of changes in this indicator are not very stable. A high rate was also registered in Kazakhstan (about 14%). In the case of other countries, the ratio fluctuates in the range of 5-10%, which indicates that there is moderate stability of the trend in these countries.

In order to make a more complete observation of the current situation, we consider it necessary to refer to the structure of current expenditures under discussion, to understand what part of current expenditures is financed from domestic funds in the countries. For this purpose, in Table 2 we present the Domestic Health Expenditure (DOM) / Current Health Expenditure (CHE) ratio for 2018, the

TABLE 1

RMSE / average ratio for the Current Health Expenditure (CHE) / Gross Domestic Product (GDP)³

Country	Average	RMSE / average
Armenia	7.93%	25.96%
Azerbaijan	2.86%	21.93%
Belarus	5.69%	5.59%
Bosnia and Herzegovina	8.88%	8.43%
Bulgaria	6.99%	7.11%
Georgia	8.18%	8.55%
Kazakhstan	3.26%	13.99%
Romania	5.05%	7.87%
Serbia	8.60%	9.57%
Turkey	4.74%	8.74%

TABLE 2

Domestic Health Expenditure (DOM) / Current Health Expenditure (CHE)⁴

Country	Indicator (2018)	Average	RMSE / average
Armenia	98.78%	93.99%	5.14%
Azerbaijan	99.33%	98.71%	0.55%
Belarus	99.71%	99.74%	0.14%
Bosnia and Herzegovina	99.58%	98.71%	1.53%
Bulgaria	100.00%	100.00%	0.00%
Georgia	99.46%	95.34%	2.44%
Kazakhstan	99.85%	99.79%	0.24%
Romania	100.00%	99.91%	0.14%
Serbia	99.32%	99.46%	0.35%
Turkey	100.00%	100.00%	0.00%

³ The calculations were made by the authors, data source: The official page of The World Health Organization, <https://apps.who.int/nha/database/Select/Indicators/en>, visited on 01.12.21 9:45 PM.

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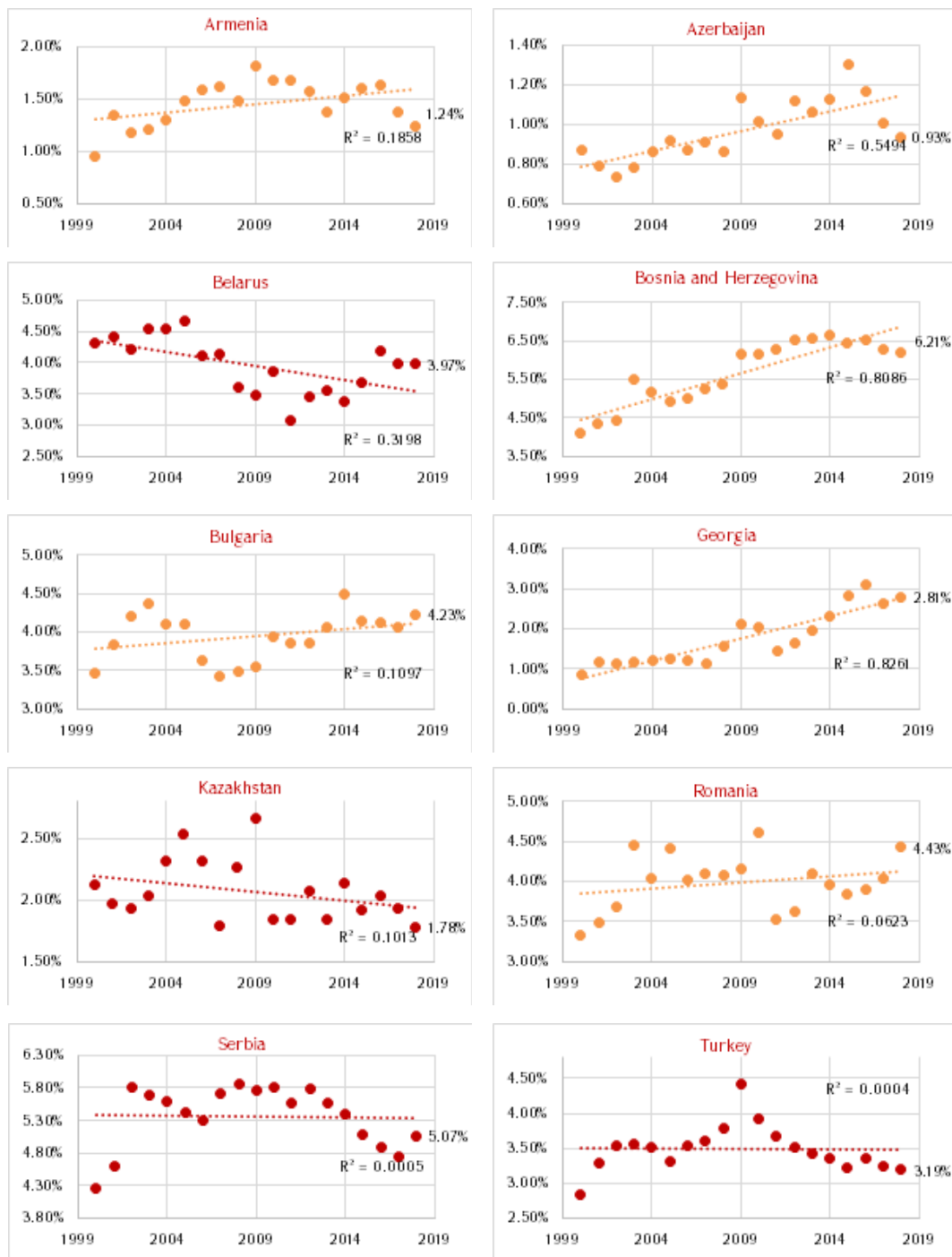


FIGURE 2

Domestic General Government Health Expenditure (GGHE-D) / Gross Domestic Product (GDP)⁵

⁵ The calculations were made by the authors, data source: The official page of The World Health Organization, <https://apps.who.int/nha/database/Select/Indicators/en>, visited on 01.12.21 9:45 PM.

average ratio of that indicator for 2000-2018, as well as the RMSE / average ratio.

In all countries surveyed, domestic sources of funding in the current health expenditures exceeded 98% in 2018. Structurally, in Bulgaria, Romania and Turkey that indicator was 100%, that is in these countries, the current health expenditures are made only at the expense of domestic resources. The only country where this indicator was less than 99% was Armenia. Naturally, Armenia has the most effective structure among the countries under consideration, as the foreign financing can lead to a positive multiplier effect, the same cannot be said for Bulgaria, Romania and Turkey.

However, it is also interesting what the tendencies are to change that structure. In Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia and Romania the Domestic Health Expenditure (DOM) / Current Health Expenditure (CHE) ratio has an increasing trend, that is, the structure in these countries deteriorates under other equal conditions. In the case of Bulgaria and Turkey, the index has no tendency to change. And only in the case of Belarus, Kazakhstan and Serbia, the structure has a tendency to improve, as the index under discussion in this case has a tendency to decline. The situation is quite effective in terms of stability of the indicators, as, in particular, in 7 out

of 10 cases the RMSE / average ratio is less than 1, and the highest rate was registered in Armenia, where the rate was around 5%, which is acceptable.

In the current epidemic, in addition to the current expenditure dynamics in the health care system, the stability of changes, and the expected trends of the indicator, it is also important to understand the state of Domestic General Government Health Expenditures in the countries under review. For this purpose, Figure 2 shows the Domestic General Government Health Expenditure (GGHE-D) / Gross Domestic Product (GDP) ratio.

Bosnia and Herzegovina tops the list of the countries with the ratio of Domestic General Government Health Expenditure (GGHE-D) / Gross Domestic Product (GDP), as it was 6.21% in 2018. Clearly low rates were registered in Azerbaijan, Armenia and Kazakhstan with 0.93%, 1.24% and 1.78%, respectively. Naturally, such a low level of this index is difficult to consider positive in other equal conditions. However, it is a positive fact that in Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Georgia and Romania, this indicator has obvious growth trends (Figure 2 shows these indicators in green). The trend of changes is negative in the cases of the other 4 countries (in Figure 2 they are painted red), but in fairness we should note that in the case of Serbia and

TABLE 3

RMSE / average ratio for the Domestic General Government Health Expenditure (GGHE-D) / Gross Domestic Product (GDP) ratio⁶

Country	Average	RMSE / average
Armenia	1.45%	14.46%
Azerbaijan	0.97%	15.14%
Belarus	3.96%	11.08%
Bosnia and Herzegovina	5.68%	14.36%
Bulgaria	3.95%	7.69%
Georgia	1.77%	38.05%
Kazakhstan	2.07%	11.67%
Romania	3.99%	8.50%
Serbia	5.36%	8.57%
Turkey	3.49%	9.21%

⁶ The calculations were made by the authors, data source: The official page of The World Health Organization, <https://apps.who.int/nha/database/Select/Indicators/en>, visited on 01.12.21 9:45 PM.

Turkey the inclination of the negative trend curve is quite low.

Let us now turn to the averages of these series and the deviations of those indices from the average (Table 3).

In the case of the average indicator, the picture is almost the same as in the case of the indicators of 2018. In particular, the highest rate was recorded in Bosnia and Herzegovina, and the lowest in Azerbaijan. The ratio of averages of these two countries is about 600%. However, it is important to assess the stability of the changing dynamics of the series. From this point of view, the most volatile situation is in Georgia, with a ratio of about 38% RMSE / average, but this instability should not be considered a negative phenomenon, on the contrary, in this case the situation is more than positive, as we can say that It is through the flexibility that Georgia has managed to secure an acceptable financing structure for current expenditures (this has already been presented in the article). In general, the high stability of this indicator indicates that in such countries there is a high interdependence between the GDP and state financing, which is not very acceptable for this sector, since, as in the case of Georgia, the state should use state financing as a flexible tool to eliminate the problems of private funding, while if GDP and state funding are interdependent, it is difficult to see the aforementioned use of the tool. It should be noted that a high level of stability is visible in Bulgaria, Romania, Serbia and Turkey. The stability rate in these countries was less than 10%, which, as noted, does not indicate the most effective situation.

Thus, summarizing the above observations, based on the experience of 10 uppermiddle-income countries, we can draw the following conclusions about the current state funding

of the health care system in countries with this level of development:

1. In upper-middle-income countries, the level of current health expenditures fluctuates between "average" levels relative to GDP.
2. In most of these countries (70% of observed cases), current health expenditures tend to increase relative to GDP.
3. These trends are largely shaped by the stability of changes and, in few cases, by high volatility.
4. Funding for current health expenditures in all countries under review is almost entirely funded internally.
5. This structure has a high degree of stability.
6. State funding for sector expenditures is relatively small compared to GDP in the countries in question. It fluctuates between the minimum and maximum thresholds of the lower range.
7. Changes in the volume of state funding in these countries do not have the same tendencies. In some countries these changes have high fluctuation rates (which is a positive phenomenon), in some - moderate and in some - low.

However, the presented conclusions are only generalized statements, and of course, in every country deviations from general trends are usually recorded. These deviations are conditioned by the level of economic development of a particular country, the peculiarities of the sphere - problems, positive or negative regulations of state policy, etc. However, the analysis shows that in upper-middle-income countries, there are some commonalities with the subject matter, a part of which is presented in the article.

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Համազասպ ԳԱԼՍՏՅԱՆ

«Ամբերդ» հեղափոխական կենտրոնի հեղափոխող, ՀՊՏՀ, տնտեսագիտության թեկնածու

Գագիկ ԲԱԴԱԴՅԱՆ

Կառավարման ամբիոնի ասպիրանտ, ՀՊՏՀ

ՀԱՅԱՍՏԱՆԻ ԵՎ ԱՇԽԱՐՀ

ԱՌՈՂՋԱԿԱՆԱԿԱՆ ՀԱՄԱԿԱՐԳԻ ԸՆԹԱՑԻԿ ԵՎ ՊԵՏԱԿԱՆ ՖԻՆԱՆՍԱՎՈՐՄԱՆ ՀԱՄԱՇԽԱՐՀԱՅԻՆ ՄԻՏՈՒՄՆԵՐԸ ՄԻՋԻՆԻՑ ԲԱՐՁՐ ԵԿԱՄՈՒՑ ՈՒՆԵՑՈՂ ԵՐԿՐՆԵՐՈՒՄ

Յուրաքանչյուր երկրում բնակչության սոցիալական ապահովությունը բնութագրող էական գործոն է առողջապահական համակարգի զարգացումը՝ պայմանավորված ֆինանսավորմամբ: Ընդ որում, համակարգի ֆինանսավորման արդյունավետության մակարդակը կախված է այնպիսի բնութագրիչներից, ինչպիսիք են ֆինանսավորման կառուցվածքը, աղբյուրները և, իհարկե, այդ գործընթացում պետության մասնակցության չափը: Նշվածների ճիշտ ծրագրմամբ հնարավոր է ապահովել ցանկալի արդյունք, մինչդեռ գործնականում հազվադեպ են դեպքերը, երբ այս առումով առկա է առավելագույն արդյունավետություն: Ուստի անհրաժեշտ է վեր հանել այն հիմնական խոչընդոտները, որոնք թույլ չեն տալիս հասնել ցանկալի վիճակի: Հենց այդ նպատակով է հոդվածում փորձ է արվում բացահայտելու ոլորտի ֆինանսավորման հիմնական միտումներն ու բնութագրիչները միջինից բարձր եկամուտ ունեցող երկրներում:

Հիմնաբառեր. *առողջապահություն, ֆինանսավորում, միջինից բարձր եկամուտ ունեցող երկրներ, ընթացիկ ծախսեր, զարգացում, պետական ֆինանսավորում*

Амазасп ГАЛСТЯН

Исследователь исследовательского центра «Амберд», АГЭУ, кандидат экономических наук

Гагик БАДАДЯН

Аспирант кафедры управления, АГЭУ

АРМЕНИЯ И МИР

МИРОВЫЕ ТЕНДЕНЦИИ ТЕКУЩЕГО И ГОСУДАРСТВЕННОГО ФИНАНСИРОВАНИЯ ЗДРАВООХРАНЕНИЯ В СТРАНАХ С ДОХОДОМ ВЫШЕ СРЕДНЕГО

Существенным фактором, характеризующим социальную защищенность населения любой страны, является развитие системы здравоохранения, а одним из ключевых факторов, определяющих это развитие, является финансирование этой системы. Эффективность финансирования этой системы зависит от таких факторов, как структура финансирования, источники финансирования элементов этой структуры и, конечно, степень участия государства в финансировании. Только при правильном формировании этих факторов можно достичь желаемого результата, но на практике бывают редкие случаи, когда у нас есть максимальная эффективность. И необходимо определить основные особенности, которые удерживают систему от желаемого состояния. Поэтому в статье делается попытка раскрыть основные тенденции и характеристики финансирования сектора в странах с доходом выше среднего.

Ключевые слова: *здравоохранение, финансирование, страны с доходом выше среднего, текущие расходы, развитие, государственное финансирование*