

ANALYSES OF THE ACTIVITY OF AR HEALTHCARE SYSTEM

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Republic of Artsakh

Abstract

The article analyzes the indicators for determining the level of medical care in the Republic of Artsakh, particularly public health expenditures, labor resources and infrastructure of the health sector and presents the general demographic statistics of the republic. A comparative analysis of the indicators with some CIC countries was also carried out. In general, it can be noted that Artsakhi authorities with the active support of the capabilities and efforts of the Republic of Armenia, Russian peacekeepers, the Diaspora and international partners are trying to raise medicine to an international level. In the conclusion, recommendations were presented for the improvement of the health condition of the population as well as the healthcare system in general.

Key words: healthcare system, natural growth, average life duration, number of medical institutions and patient rooms, number of doctors of all specialties (per 10000 people), average number of medical staff (per 10000 people), share of state expenditure of AR healthcare in GDP.

Introduction

The healthcare sector is one of the most important components of national security in Artsakh. The protection of health of citizens is the primary task of the state, a mandatory condition for the normal functioning of any society in which the leading and coordinating role belongs to the healthcare system.

Healthcare is the most important social sector of society. The socio-economic and political reforms taking place in the country have a great impact on both healthcare and the economy in this area.

Conflict setting

Taking into account the importance of the healthcare sector for Artsakh, it is necessary to analyze the overall operation of the healthcare system. To describe the health condition of the population of Artsakh and to characterize the health problems let us study the legal regulatory laws of the field and analyze the following indicators:

- Demographic condition,
- Number of doctors of all specialties and medical nurses (per 10000 people),
- Number of medical institutions and patient rooms,
- Number of medical institutions providing medical care to the population,

- Share of healthcare expenditures in state budget.

Research results

According to Article 85 of the Constitution of the Republic of Artakh, the main goal of the state policy is to implement programs to protect and improve the health of the population and to create effective and affordable medical care. According to the provisions of the Constitution and other legislative acts, health care is a set of political, economic, legal, social, cultural, scientific, medical, sanitary and anti-epidemic measures aimed at protecting and strengthening the health of each person, family, society and maintaining a long and active life.

Healthcare system is regulated by the following laws in the Republic of Artsakh [3].

1. Donors of blood and its components and injections as medical care, adopted in 2012
2. Psychiatric help, adopted in 2011
3. Drugs and psychoactive preparations, adopted in 2003
4. Reproductive health and reproductive rights, adopted in 2003
5. Licensure, adopted in 2002
6. Prevention of diseases from immune insufficiency, adopted in 2002
7. Providing the sanitary-epidemic security of the population, adopted in 1998
8. Medicine, adopted in 1998
9. Medical help and service for population, adopted in 1998

In order to ensure the policy of dynamic development of the healthcare sector, the legislative framework of the sector is being improved such as the development and adoption of the Law on Healthcare of the Artsakh Republic which mainly regulates the activities of the healthcare sector.

The policy of the Government of the Artsakh Republic in the field of healthcare is developed and implemented by the republican body of executive branch which is the Ministry of Health of the Republic of Artsakh.

The priority strategies of the policy implemented by the state in the field of healthcare are:

- provision of the hygienic and epidemic safety of the population
- the primary provision of people's health
- provision of motherhood and children care
- provision of medical care to socially vulnerable people included in separate (special) groups and medical care to patients with special diseases
- provision of medical preparations
- improvement of the information system
- ensuring effective management of public funds and other financial flows which is planned to be implemented with the introduction of a new e-health system.

The population of the Republic of Nagorno Karabakh comprised 189.1 thousand people in 1989. As a result of war and blockade it decreased and it comprised only 122.6 thousand in 1995. Since 1996 the population has increased to 148, 9 thousand people by being added 24, 6 people and on January 1st, 2021 it comprised 148, 9 thousand people (Fig. 1).

Demographic processes are characterized by declining birth rate dynamics and low natural growth as shown in Figure 2. A significant indicator of changes in population viability up to 4-year old infant mortality rate in Artsakh was 13.2 per 1000 live births in 2019 [4] which is a high rate while in some European countries it is in average - 4, in Armenia - 12, in Belarus - 3, in Russia – 6 and in Azerbaijan - 20 [5].

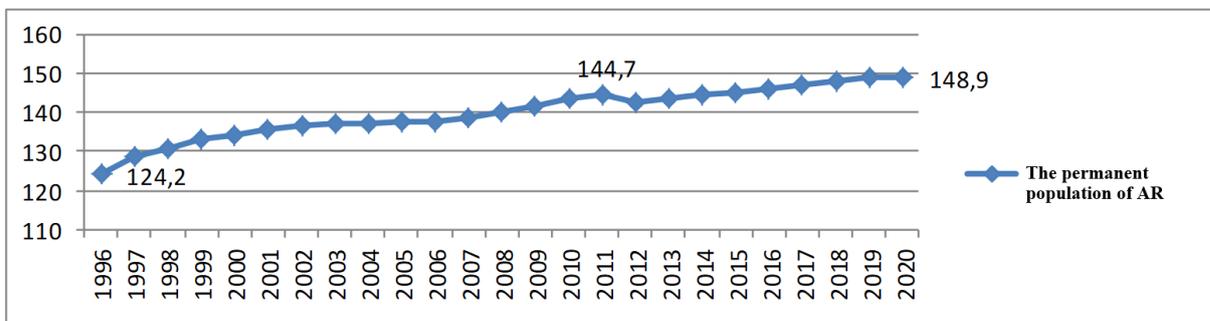


Fig. 1 The permanent population of AR, total in the end of the year, thousand people [4]

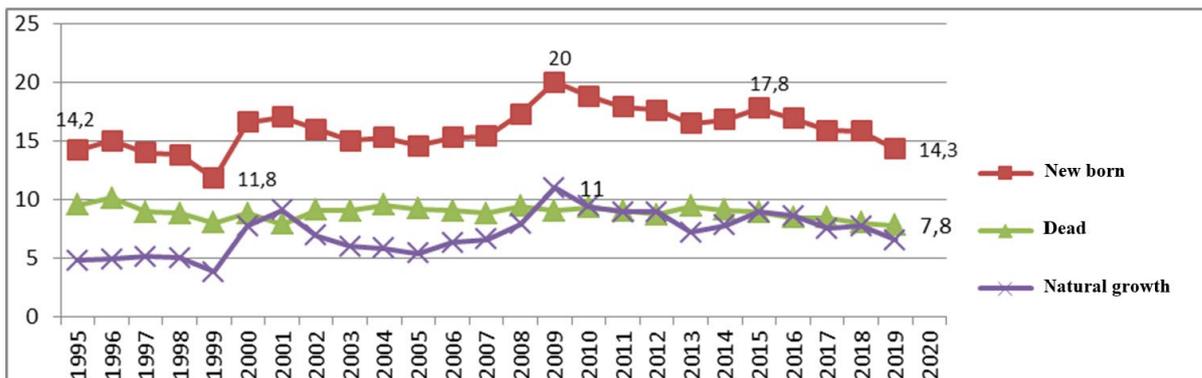


Fig. 2 The number of new born and dead in AR and dynamics of natural growth per 1000 people [4]

The number of deaths in Artsakh increased by 24.5% in 2020 compared to 2019. The majority of deaths were due to diseases of the blood circulatory system in 2020- 47.6%, followed by oncologic diseases - 12.6%, the third - respiratory diseases - 3.9%, about 2% of deaths were caused by a new corona virus (COVID-19). 23% of deaths were due to hostilities.

The new type of corona virus epidemic has become a serious challenge for both the world health system and the Artsakh health system which has identified some problems such as the lack of specialized inpatient beds, medical staff and personal protective equipment as well as the imperfection of health care financing systems.

As of December 5, 2021 there were approximately 265 million confirmed cases of Covid-19 worldwide with more than 5.2 million deaths reported by the WHO [6]. 24899 citizens were examined for the laboratory detection of coronavirus in Artsakh in 2021 of which 4173 had a positive test result, which is almost twice as high as last year. The impact of the epidemic on human health has yet to be assessed including statistical assessment [3].

Artsakh has always been famous for its longevity. In the former USSR, most of the citizens aged 100 and more lived in the territory of the NKAR - 144 people per 100 thousand inhabitants. According to experts, due to the peculiarities of the climate and food, the long-lived people of Karabakh had stronger health than the long-lived people of other regions. Despite all that the people of Artsakh have had to go through during these 30 years, the average life expectancy from birth to death, according to the data on 2019, is 75.6 years which is higher than in the former USSR, but lower than in developed countries (Fig. 3).

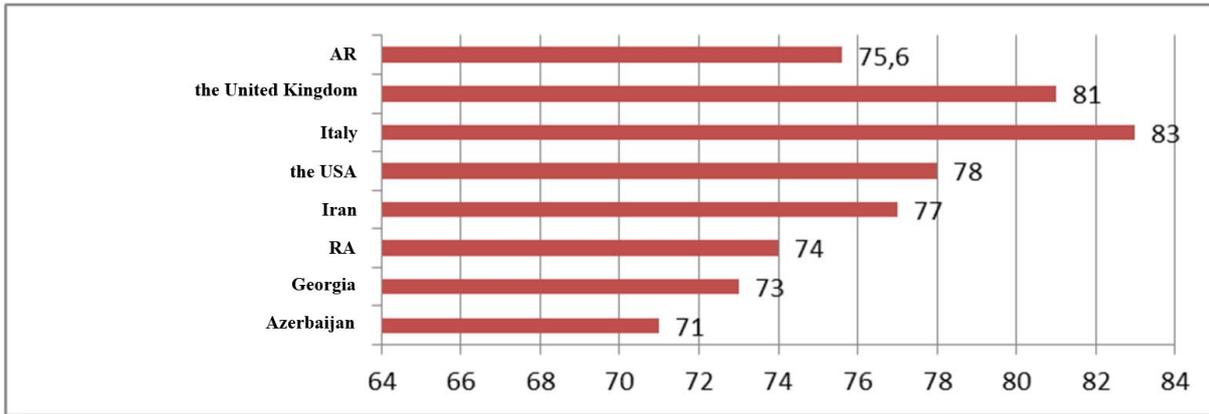


Fig. 3 Average life expectancy, the data on 2019 [6]

The availability of medical services, the degree of involvement of population in medical services and the quality largely depends on the availability of qualified medical staff (Figure 4). The adequacy ratios of physicians and medical staff in Artsakh are higher than those of WHO member states. Thus, the number of doctors in all specialties in Artsakh per 10,000 inhabitants comprised 21.5 and the average number of medical staff per 10,000 inhabitants was 92.9 in 2020. It should be noted that more than 65% of WHO member states, as of 2020, indicate that there are less than 20 doctors per 10,000 population and more than 55% of WHO member states report that there are less than 50 nursing and obstetric staff per 10,000 inhabitants [6].

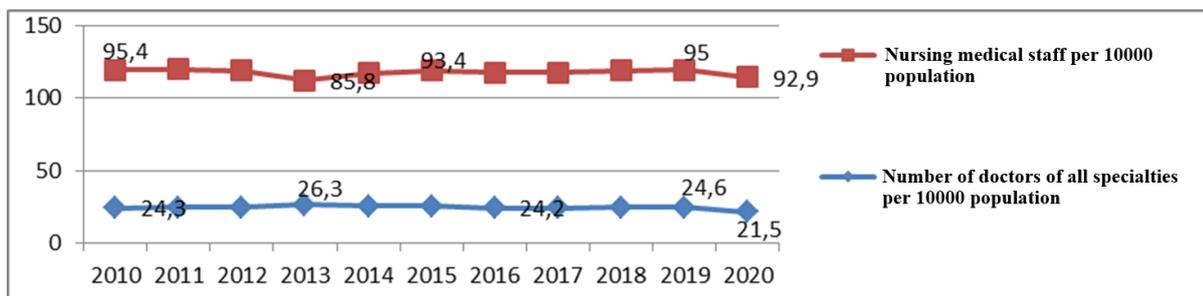


Fig. 4 Number of doctors of all specialties and nursing medical staff per 10000 population, total [4]

One of the factors influencing public health is the condition of the distribution of medical institutions and their activities (Figs. 5, 6). During the war, a number of medical facilities along with other important livelihood facilities suffered from bombings in Artsakh. The number of medical institutions providing medical and outpatient care to the population of hospitals decreased by the end of 2020 as a result of the occupation of 72.3% of the territories of Artsakh by Azerbaijan during the last war, 5 regional medical associations were lost. During the same period, the number of beds for hospitalized sick children (per 10,000 children) also decreased.

The number of hospital beds comprised 40.3 thousand unit in the end of 2020 which is a decrease by 8.1 unit compared to the previous year and is a lower rate compared to the rate of CIC countries (diagram 6, 7).

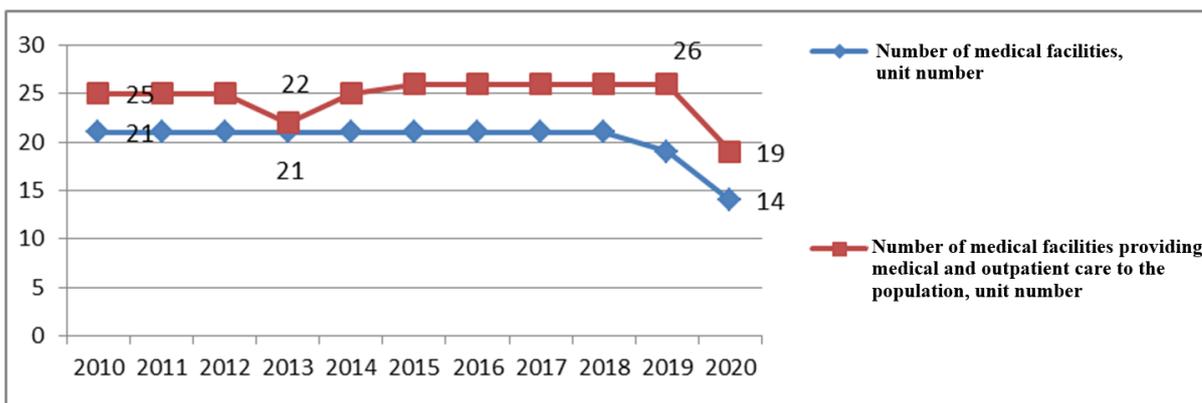


Fig. 5 The number of medical facilities providing medical and outpatient care to the population, unit number [4]

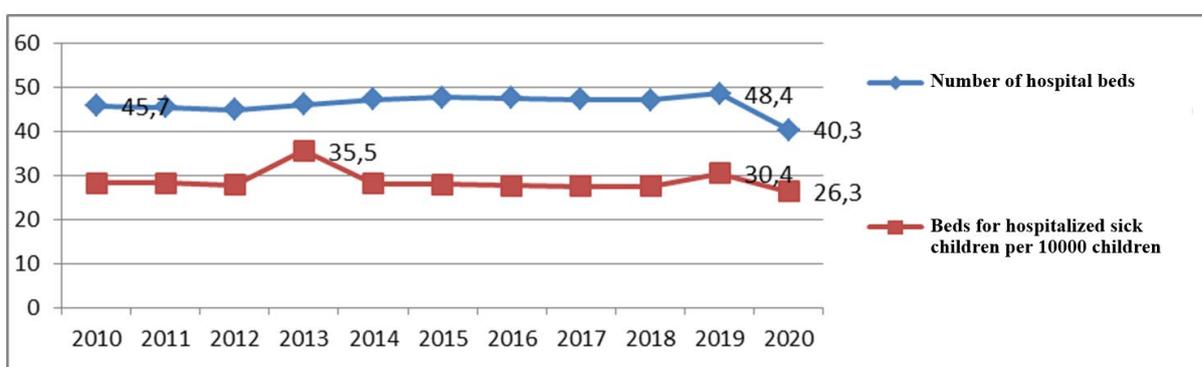


Fig. 6 The number of hospital beds and beds for hospitalized sick children per 10000 population and [4]

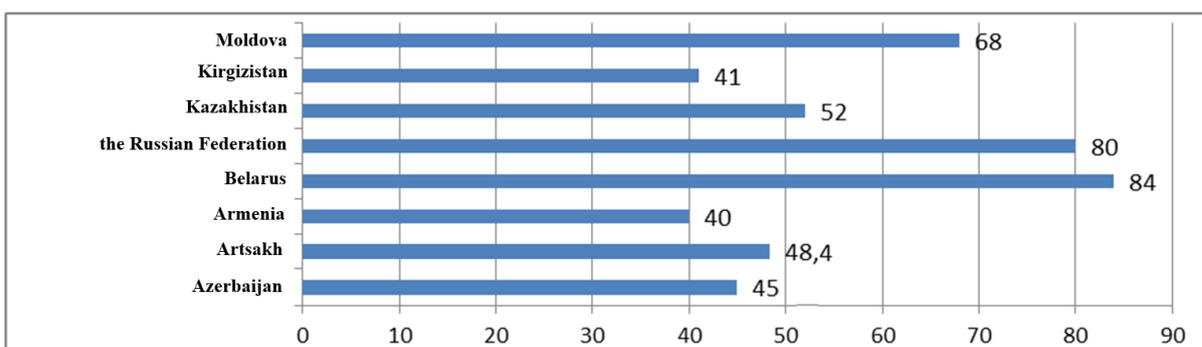


Fig. 7 Number of hospital beds of AR and CIC countries in 2019 per 10000 population [1]

The medical organizations are the following in Artsakh

- Medical organizations acting under AR Ministry of Health
 - «Republican Medical center» CJSC
 - «Arevik» medical union CJSC
 - «Healthcare center for motherhood and children» CJSC
 - «Stepanakert emergency station» CJSC
 - «Dermatology and venereology» CJSC

- «Psychiatric and drug dispenser» CJSC
- «Anti - tuberculosis» SNTO
- «Caroline Cox Rehabilitation center» SNTO
- «Epidemic and hygiene center» SNTO
- «Bureau of forensic medicine» SNTO
- «Martuni regional medical union» CJSC
- «Askeran regional medical union» CJSC
- «Martakert regional medical union after R. Baziyan» CJSC
- «Stepanakert Prosthetic orthopedic center» SNTO
- Private ambulatories and polyclinics in AR
- Stomatological services are provided by private stomatological clinics
- Central and Ivanyan military hospitals
- Special medical brigade of Russian peacekeeping unit

Serious work has been recently done in the Artsakh Republic to build modern medical institutions, to improve and expand the quality of medical services. The healthcare system of Artsakh is first of all associated with the new Republican Medical Center after Sargis and Amalya Karapetyan which was put into operation in 2013.

The building of the “Republican Medical Center” Closed Joint-Stock Company was financed by the Tashir Group of Companies, personally chaired by its chairman Samvel Karapetyan. Definitely, the operation of such a center has raised the population's medical service system to a qualitatively new level. According to experts, the center meets the world standards with its functional capabilities. This is a multi-level medical institution equipped with the necessary equipment for high-tech X-ray, ultrasound, functional endoscopic diagnosis, artificial lung ventilation, blood tests etc.

Of course, the operation of the medical center presupposed the training of clever and professional staff and raising the qualification of doctors. That is why, before the commissioning of the facility, a group of doctors were sent from Artsakh to Armenia and some foreign countries for training. In particular, 53 doctors and 5 nurses were trained in various foreign medical institutions in Armenia in 2017. Cooperation has been established with “Nairi” and “Erebuni” medical centers in Yerevan. Highly qualified specialists in the field of consulting and medical care are involved in this process. The medical institutions of Artsakh are replenished with both local staff and specialists invited from Armenia.

Another achievement of Artsakh medicine is the building of Stepanakert Anti-Tuberculosis Dispensary operated in April 2017 which also meets modern standards. The Hayastan All-Armenian Fund and French-Armenian beneficent Richard Hovhannisyanyan made a significant contribution to the implementation of the project. The dispensary is being replenished with the necessary equipment both from the state budget and from charity organizations and individual benefactors.

In Artsakh, special attention is paid to children's health care which is in the center of the state attention. “Arevik” Medical Association Closed Joint-Stock Company was established on the basis of the Republican Children's Hospital and Children's Polyclinic which suffered from the shelling and bombardment of the Azerbaijani side in the early nineties. Today “Arevik” is a modern medical complex, which consists of outpatient polyclinic-inpatient services, which are provided with the necessary equipment for examination and diagnosis of

disease starting from the first day of a child's birth. “Arevik” has close ties with children's medical institutions in Armenia.

About 800 people receive help every year at the Rehabilitation Center after Baroness Caroline Cox in Stepanakert. Specialists of various profiles deal with the rehabilitation of adults and disabled. The center has a specially equipped swimming pool, gym as well as painting, sewing, ceramics and other classes the activities of which are aimed at the full integration of children in society.

Special attention is paid to the disabled in Artsakh which has survived a severe and continuous war. Thanks to the “International Christian Solidarity” organization, there is an orthopedic prosthetic center in Stepanakert which was opened on the initiative of Baroness Caroline Cox. The services of the center are mainly used by the disabled and wounded servicemen.

The central military hospitals of Stepanakert and Ivanyan community provide medical services in the territory of the Republic of Artsakh both to servicemen and their families and citizens which are not operating under the financing of the Ministry of Health of the Republic of Artsakh and are funded by the Republic of Armenia.

A ceasefire was declared in Nagorno Karabakh on November 10, 2020 which deployed a peacekeeping force of the Russian Federation to control the hostilities in Nagorno-Karabakh. The latter provides medical services on the spot. A special medical unit of the Russian peacekeeping contingent provides assistance to the local population both in Stepanakert and in other settlements of Nagorno-Karabakh. [7]

Thus, it can be stated that the Artsakh authorities with the active support of the opportunities and efforts of the Republic of Armenia, Russian peacekeepers, the Diaspora and international partners are trying to raise medicine to an international level.

The analysis of NKR public health expenditures (in % of GDP) shows that in general healthcare expenditures are low and in 2020 it was 2.7%, the growth of which, compared to 2019, is related to both the spread of the epidemic the first half of the year and the 44-day war (Fig. 9). It should be noted that the same indicator for 2017 was in Artsakh - 2.2% of GDP, in Armenia - 1.5%, in Kazakhstan - 2.2%, in Azerbaijan - 1.0%, in Belarus - 4.1% and in the Ukraine - 3.4%, while public health expenditures in EU countries as a percentage of GDP - in Austria - 8.1% and in Germany - 7.2% . Consequently, despite the fact that the share of public health expenditures in GDP compared to some countries is high, it still stays behind some CIC and EU countries.

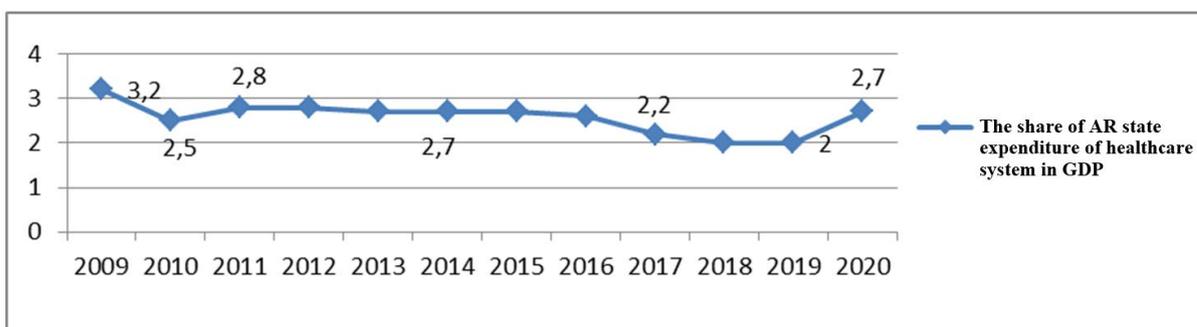


Fig. 8 The share of AR state expenditure of healthcare system in GDP

The share of healthcare expenditures in the total state budget expenditures (Fig. 9) comprised 11.3% in 2020 which is almost twice as high as the same indicator of the previous year, it is higher than the level of the corresponding index of other CIS countries. It should be noted that most of the state budget allocations in 2021 were for health care: 34% - for outpatient services, 28% - expenditures on hospital services (Figs. 10, 11).

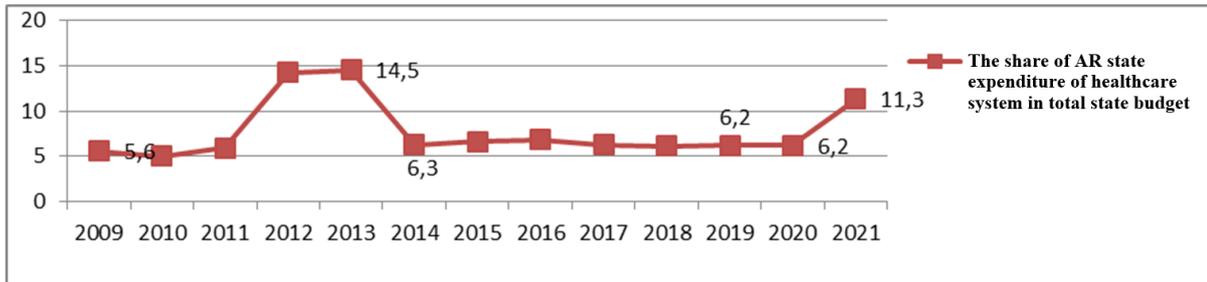


Fig. 9 The share of AR state expenditure of healthcare system in total state budget

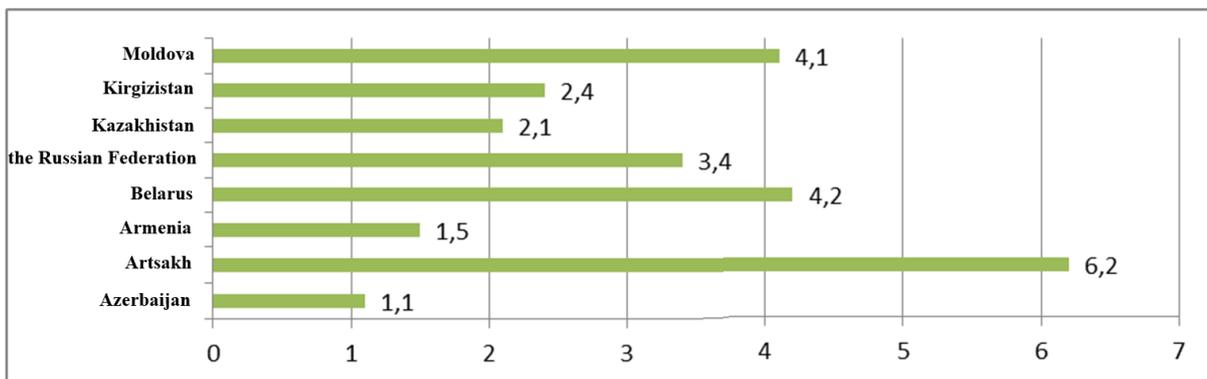


Fig. 10 The share of healthcare expenditure of AR and countries of CIC in total expenditure of state budget in 2019 [1]

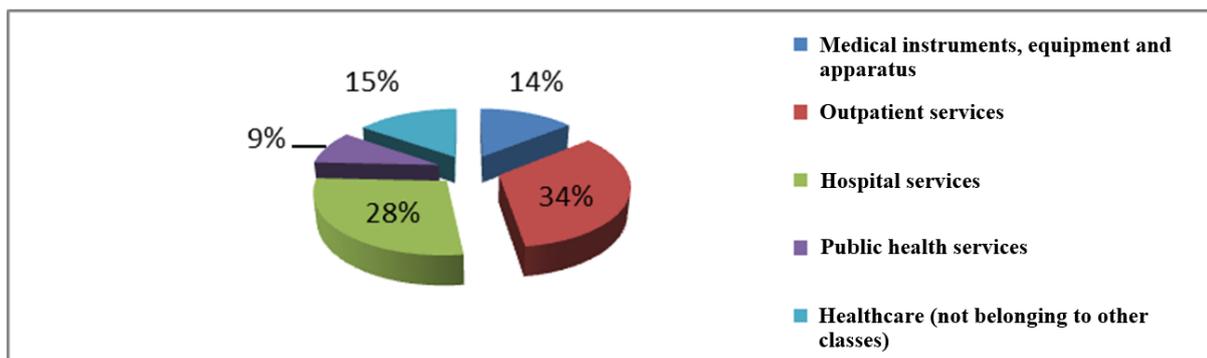


Fig. 11 Allocations of AR healthcare of 2021 state budget according to the functioning classification of budget expenditure [2]

Conclusion

Summarizing, we consider that for both the healthcare of population of Artsakh and improving the healthcare system the following steps are necessary:

- ✓ Implementation of measures aimed at continuous improvement of the qualification of the medical staff;

- ✓ Work for the prophylactic of public health and promotion of healthy lifestyle;
- ✓ Continuous improvement of provided services and investment of electronic medicine for which serious programmig reforms are needed;
- ✓ Supervising of current financing stimulus and models.

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Ավանեսյան Ն.Հ.

Արցախի պետական համալսարան

Հոդվածում կատարվել է ԱՀ-ում բժշկական օգնության տրամադրման մակարդակի որոշման ցուցանիշների, մասնավորապես՝ առողջապահության պետական ծախսերի, առողջապահության ոլորտի աշխատանքային ռեսուրսների և ենթակառուցվածքների վերլուծություն, ներկայացվել է հանրապետության ընդհանուր ժողովրդագրական վիճակագրությունը: Կատարվել է նաև ցուցանիշների համեմատական վերլուծություն ԱՊՀ որոշ երկրների հետ: Ընդհանուր առմամբ, կարելի է նշել, որ Արցախի իշխանությունները Հայաստանի Հանրապետության, ռուս խաղաղապահների, սփյուռքի և միջազգային գործընկերների կարողությունների ու ջանքերի ակտիվ աջակցությամբ փորձում են բժշկությունը բարձրացնել միջազգային մակարդակի: Եզրակացության մեջ առաջարկություններ են ներկայացվել ինչպես բնակչության առողջական վիճակի, այնպես էլ ընդհանուր առմամբ առողջապահական համակարգի բարելավման համար:

Բանալի բառեր՝ առողջապահության համակարգ, բնական աճ, կյանքի միջին տևողություն, հիվանդանոցային հիմնարկների և մահճակալների թիվը, բոլոր մասնագիտությունների բժիշկների թվաքանակը (10 000 բնակչի հաշվով), բժշկական անձնակազմի միջին թվաքանակը (10 000 բնակչի հաշվով), ԱՀ առողջապահության պետական ծախսերի մասնաբաժինը ՀՆԱ-ում:

АНАЛИЗ ДЕЯТЕЛЬНОСТИ СИСТЕМЫ ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ АРЦАХ

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В статье проведен анализ показателей для определения уровня оказания медицинской помощи в РА, в частности, анализ государственных расходов на здравоохранение, трудовых ресурсов здравоохранения и инфраструктуры, представлена общая демографическая статистика Республики. Проведен также сравнительный анализ показателей с некоторыми странами СНГ. В целом, можно сделать вывод, что власти Арцаха при активной поддержке возможностей и усилий Республики Армения, российских миротворцев, диаспоры и международных партнеров пытаются поднять медицину на международный уровень. В заключении даны предложения как для улучшения состояния здоровья населения, так и системы здравоохранения в целом.

Ключевые слова: здравоохранение, естественный прирост, средняя ожидаемая продолжительность жизни при рождении, количество больничных учреждений и больничных коек, численность врачей всех специальностей (на 10 000 населения), численность среднего медицинского персонала (на 10 000 жителей), доля государственных расходов здравоохранения АР в ВВП.

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