Problems and Development Options of the Health Care System in the Republic of Dagestan

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Abstract – The article is dedicated to revealing the organizational issues that are present in health care system of the Republic of Dagestan. The purpose of the article is linked to its contemporary nature – resolving the problem of demographic situation in the country as a whole and in its individual regions. The article characterizes the current health care system of the republic, showing existing problems, whose solutions are usually of subjective nature. Substantiations are given to general problems and causes of inefficiency of the health care system. Factors that determine the efficiency of the system are classified, thus allowing for a detailed analysis of the current state of the health care system and its subsequent evaluation. It has been established, that functioning of the system becomes more complicated in mountainous regions, leading to issues in providing population with quality medical services. Substantiations are provided for the necessity to place medical institutions in the closest vicinity of mountainous population. The key problems in the health care system of the Republic of Dagestan has been revealed. Among them there is shortage of qualified doctors and nurses. This problem did not find its fundamental solution and is still unresolved. Low salaries of doctors and nursing staff; weakness of material and technical resources of medical establishments, especially in the countryside. Possible options for improving the quality of medical services have been defined. First, building of stationary medical facilities in the mountainous areas, second, development of the system of aftercare in the mountainous part of the republic by means of organizing building and provision of materials, resources and equipment to establish local therapeutic resorts. It has been proven, that there is a relation between unavailability of quality medical services to rural population in mountainous areas, lack of quality doctors in rural medical facilities and low pay for their work in the republic. Significance of this research is in that it determines the problems of health care system of the republic and defines tentative solutions.

Keywords – healthcare, health, health care improvement program, health care in the Republic of Dagestan

I. INTRODUCTION

Development of health care in coordination with development of other spheres of social life has a fundamental importance for the society. The problem being studied is timely, as the health of population and demographic situation in the country and its regions is the main problem that the Russian society faces. This problem is especially vexed in such regions of the Russian Federation as the Republic of Dagestan, where the health status of population is influenced by natural-climatic, socio-economical, cultural and historical features of living. Besides, a shaping factor that determines the quality of life of people in such regions is affiliation with the urban or rural (especially mountainous) population.

These factors that influence the quality development of health care can be seen virtually throughout the country. Within this context, it should be noted that solution of the most pressing problem in the health care system of the Republic of Dagestan, namely, provision of quality medical services to rural people, especially those in the mountainous part of the republic, depends on efficiency of organization of the health care system at the republican level.

II. PROBLEM STATEMENT

Substantiation of issues and causes of inefficiency in the health care system in the Republic of Dagestan is based upon the fact that half of its population live in rather hard-to-get places and thus are not getting quality medical services. Among them there are people of working age involved in household level production, are studying in the classroom, are doing military service. However, all the working age part of population, independent of their living in mountainous area, participate in the state medical insurance, contributing to the mandatory medical insurance fund.
Among the specific problems in increasing the efficiency of health care in the Republic of Dagestan there are: the problem with establishing inpatient wards in all large rural settlements; the problem with establishing inpatient branches of leading medical institutions, including diagnostic, perinatal centers and family planning centers, etc.

Statistics shows that currently, there are 237 active facilities of the Ministry of Health Care in the territory of the republic. Out of them, 203 facilities operate within the framework of mandatory medical insurance. They are the organizations participating in the territorial program that provides state-guaranteed free medical care to population. Among them there are medical facilities in cities and district centers, which are mainly located in the lowlands. Due to that, it should be clarified that district (rural) hospitals lag behind urban hospitals in the quality of medical care. In our opinion, there are internal and external causes of such lagging. The internal causes of low quality service in district hospitals are: lack of high-qualification doctors, nurses and other medical personnel. This cause is related to declining academic ranking of republican medical education institutions and insufficient pay for doctors operating in mountainous areas. Modern

### III. Research Questions

Study of the general situation in the health care system of the Republic of Dagestan allows highlighting general and specific problems of its organization, whose solution will lead to increased efficiency of the health care system of the republic. The general problems here are: The problem of availability of medical facilities to every citizen, maximum approach to populations living in hard-to-reach locations; establishing efficient system of preventive care throughout the region; creating a system of timely and comprehensive medical diagnostics of population.

Among the specific problems in increasing the efficiency of health care in the Republic of Dagestan there are: the problem with establishing inpatient wards affiliated with leading republican medical centers in municipal hospitals; the problem of creating diagnostic, perinatal centers and family planning centers in district-level hospitals; the problem of creating leading medical institutions, including diagnostic, perinatal centers and family planning centers, etc.

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medical education shall make it possible for a specialist to master in-depth the biopsychosocial model of health care provision [1].

There is a need to train pediatricians to improve their capabilities in evaluating, analyzing and revealing a disease, to improve their analytical thinking (Healthcare marketing advisor, 2006).

Thus, there is also a need to highlight the main personnel-related problems in the health care organizations, among them there are:

- outflow of medical personnel from the sector; low salary; insufficient level of training of doctors and nursing staff [5]. Graduates of central tertiary schools usually stay and work in the regions of their graduation, as they do not want to work as doctors in mountainous areas for crummy salaries, as besides the responsibility to be a medic, they also have a responsibility to keep a family;
- lack of modern medical equipment necessary to provide population with quality medical services. There is also a shortage of specialists trained for operation of this expensive equipment;
- absence of as little as feldsher's station for first-aid treatment in most of rural settlements

Besides internal causes related to organization of the health care system, there are external causes that also negatively impact the efficiency of the health care in the republic:

- absence of a system of measures stimulating population to lead a healthy lifestyle;
- wide currency of behavioral factors leading to increased risk of non-infectious diseases;
- high level of influence from biological factors onto increased levels of morbidity involving such non-infectious diseases as arterial hypertension, hypercholesterolemia, hyperglycemia, obesity;
- insufficiency of legal and economic conditions, insufficiency of state programs aimed to promote population's healthy lifestyle;
- delay in seeking medical advice that often results in lethal outcome and increased level of infant mortality. Moreover, the research has shown that health evaluation indicators in children differ from those of adults;
- insufficiency of preventive activities in services provided to population by the primary care section of the health care system That is why identification of diseases, pathological states and their genetic factors is poor;
- insufficient application of modern technologies capable of replacing inpatient care. Besides, medical personnel is spending their time to fulfill untypical functions due to lack of personnel and irrational organization of labor [10].

- inefficient mechanism of organizing provision of medical care to rural population, especially that living in mountainous localities There shall be a study of tentative solutions of social problems in the context of social reforms, as well as measures for their implementation [8].
- weak implementation of already developed norms and standards covering medical care;
- lack of unified standards in equipping hospitals and clinics;
- lack of mechanism to optimize provision of medical care and minimize out-of-pocket costs for patients living in rural and mountainous areas. A feedback needs to be established between the health care spending and efficiency of its use [6].

IV. PURPOSE OF THE STUDY

The causes of low quality medical services in the republic that we have above largely point to inefficiency of health care organization within the republic itself. Besides, the research has shown that health care spending increases with increase in morbidity, but not with increase in the number of people holding a medical insurance policy [11].

Thus, any statement of officials that there are all conditions in the republic to provide rural and even mountainous population with readily-available and specialized medical care are far from reality. The goal of this paper is to study this problem and draft some tentative solutions.

V. RESEARCH METHODS

The problems in the health care system in the Republic of Dagestan and their causes that are referenced above may be classified as factors that determine the efficiency of this system, as we do in Table 1. This classification allows for a detailed analysis of the current state of the health care system in the Republic of Dagestan and its evaluation.

The evaluation of the health care system shall take into account all the factors reflected in Table 1. Analysis shows that practically all of them are factors that hamper development of the republican health care system.

Let us assume that the health care system is mature and its services lead to desired results (e.g., reduce mortality, increase the health level of the population). In this case, let us consider that the medical development index is equal to unity (1). Then, on the assumption of all the indicators characterizing the development of the health care system in the Republic of Dagestan are below satisfactory level, it is natural to conclude that the health care system in the Republic has the medical development index less than (1).

This discrepancy increases, if the health care system in the Republic of Dagestan is divided into urban and rural parts. If we consider availability of medical services to population of the mountainous part of the republic, the index value will be significantly lower than that in the urbanized part of the republic.
In order to close the gap in the medicinal development between the urban localities where main medical facilities are located and rural areas (especially mountainous ones), the Ministry of Health Care of the Republic of Dagestan shall resolve two problems. First, there is a problem of shortage of doctors and nursing staff throughout the whole republican health care system. Second, the medical facilities shall be made closer to the rural population, especially mountainous population, to provide timely medical aid.

VI. FINDINGS

The conducted research shows that doctors density in the Republic of Dagestan is 32 doctors per 10,000 of population, as of 01.01.2019. Country's average for this indicator is 45 doctors.

As of 01.01.2019, the nursing personnel density in the health care system is 80 employees per 10,000 population, while the average value for the Russian Federation is 95 employees per 10,000 population (Local organization of the Federal Statistics Bureau for the Republic of Dagestan, 2019).

Table 2 shows reporting data covering medical service density in the health care system of the Russian Federation as a whole and in the Republic of Dagestan for 2018.

From the Table 2 it is obvious, that there is a significant deviation in the numbers of doctors and nursing staff in the Republic of Dagestan as compared to the same indicator in the Russian Federation as a whole.

Availability of medical personnel is essential for the health care system. High quality medical personnel for the health care system in the Republic of Dagestan is one of the factors that determines the qualitative aspect of its development. There is a constant shortage of medical personnel, especially doctors in the Republic of Dagestan. All the available workforce of high quality doctors and nursing staff is working in the medical facilities in cities and large district-level settlements, better equipped and more convenient for medical practice. Consequently, urban population gets higher quality medical care that the population in remote rural and mountainous part of the republic. Thus, lack of quality doctors in the rural medical facility points to the problem of unavailability of quality medical care to the rural population. For example, the role of nurses in the context of functions assigned to them by the health care reform shall be reconsidered.

In the interest of a more detailed study of this problem, Table 3 shows data characterizing availability of medical personnel in the republic not only in comparison with the country as a whole, but with a breakdown into urban and rural parts of the republic. Data in Table 3 show that on average, the Republic of Dagestan has a shortage of 3983 doctors (13787 – 9804), while the shortage of the nursing staff is 4595 persons = (29106–24511). Comparison between the value of this indicator in the urban and rural areas of the Republic of Dagestan against the country average shows that in the shortage of doctors in the urban areas amounts to 1799 persons = (6226 – 4427), while in the countryside it is 2184 = (7561 – 5377), which is 385 more than in the urban areas. For the nursing staff, as it is evident from Table 3, the shortage amounts to 2075 persons = (13144 – 11069), while in the countryside it is 2520 = (15962 – 13442), which is 445 more than in the urban areas.

No efficient measures are taken in relation to the second problem, the one of making medical facilities closer to the population in the countryside, especially in the mountainous localities to ensure timely medical aid.

VII. CONCLUSION

The authors believe that solution of this problem shall become a national project, as it is unsolvable with individual measures. It would requires adopting at least two republican-level programs.

The first program is that of building hospitals in the mountainous area, which will be used not only to provide first aid, but to perform serious surgical intervention in situ. There are all the necessary conditions for creating such a system in the republic, as the necessary tools have already been developed elsewhere: medical information network, electronic health record, telehealth, etc. Implementation of such systems may save hundreds of millions of rubles, which is important for a subsidized region as the Republic of Dagestan, while strengthening the health of the population. At the same time, best practices from leading doctors shall be used by establishing the mentor status, facilitating higher professionalism of doctors and nurses [7].

The second program is development of a system of aftercare. This system shall develop not only in the coastal zone of the republic, but in its mountainous part as well, by organizing building, material-technical and other resource allocation of independent treatment centers.

In addition to the general problems, there are also problems, whose solution is of large importance for solving more specific problems mentioned above. The key problems in the health care system of the Republic of Dagestan include: shortage of qualified doctors, nurses and other medical personnel. This problem has not got a radical solution and is still unresolved. Nevertheless, medical education trains qualified medical personnel [2]; low salaries of doctors and nursing staff in the republic. Transition of many services provided to the population into commercial services has become a hotbed for bribery and corruption throughout the health care system of the republic. For example, an ambition to lower the labor expenses may be perceived as limitation of clinical freedom of doctors [2]; unsatisfactory state of physical infrastructure of medical facilities, especially those in the countryside. Resolving these problems forms conditions for increasing the efficiency of organizing activities of the health care system itself.

More attention shall be paid to questions of medical documentation and social relief calculations (Korotkova, 2004). Unfortunately, the health care system of the Republic of Dagestan shall has weaknesses in its organization of activities.

Study of the problem of medical personnel shortage has shown that in the Republic of Dagestan there is no systemic
work aimed at solving this problem. That is why the actual numbers that show the real state of the health care system do not match the statistical data.

The research has also shown that it is necessary to form necessary conditions for aftercare in the Republic of Dagestan. Reform of the health care system shall pursue not saving of funds, but their more efficient use for improvement of health of the whole population [9]. This required developing the treatment resort system. The existing chain of aftercare facilities is extremely insufficient for the population of the republic.

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