Problems and Ways to Increase Accessibility of Medical Aid at All Stages of Treatment of CVD Patients

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Abstract: High death rate of cardiovascular deceases (CVD) to a great extent is determined by non-optimal accessibility of cardiological rehabilitation. The article gives estimate of aid’s accessibility for population in Russia and Republic of Dagestan, characterized by high proportion of rural population living in mountains. It was found that in such places people face the problem of insufficient number of beds for patients of cardiological profile, beds for rehabilitation, medical personnel of cardiological profile. Main areas of focus and possible ways of how to facilitate development of health care system in regard to CVD patients and their rehabilitation have been formulated by the authors.

Key words: Medical aid • CVD • Public healthcare system

INTRODUCTION

By now the problem of cardiovascular pathology has become acute and can be found on mass scale-it keeps leading positions among other deceases resulting not only in disability of a patient but in his death as well. High CVD costs become real burden for the system of state healthcare and for the whole country [1]. Modern clinical studies demonstrate that leading a healthy life, struggling with factors of risk and prescription of drug (medication) therapy will enable to reduce CVD death rate for 15-25% and improve the state of decease [2]. In spite of distinct effectiveness of rehabilitation and repeated preventive measures for CVD patients, the extent of participation in the rehabilitation programs remains low even in developed countries [3]. For example in the USA only 20% of all patients participate in such programs, in Europe (complex controlled rehabilitation programs)-not more than 30% [4]. In Russia the problem of outpatient (ambulatory) CVD rehabilitation is serious: only small proportion of patients who suffered myocardial infarction is directed to rehabilitation in cardiac sanatoriums. Outpatient-polyclinic stage is a bottle-neck of all cardio-rehabilitation in Russian system. It is only recently when they started to talk of organization rehabilitation centers for outpatients organized in European pattern [5] but the solution is still not found. Modernization processes taking place in public healthcare in the country demand revision of quality management concept and increase in accessibility of rehab services to CV patients.

General rate of CVD in Russia is still very high and exceeds appropriate rates in developed European countries by 4-7 times [6]. In the same time favourable trend of reduction of death rate has been observed: for the period 2005-2011 death rate resulted from heart deceases and blood circulation problems has decreased for 17,2%, to a great extent thanks to the middle-age persons where death rate has decreased for 28,4%. Dynamics of deaths resulted from CVD is shown in Figure1.

Death rate in rural territories is much higher than in the cities. In 2011 deaths resulted from CVD for rural territories (853 people for 100000 population) exceeded the city death rate for 19% (717 for 100000). In 2011 death rate of working age population in rural territory was higher than in the cities for 25.6%.

Numerous studies of decease and death rates in Russia demonstrate so called “scissors-phenomenon” among city population: when death rate is high decease rate is low [7]. Such phenomenon can be connected either
Fig. 1: Dynamics of deaths resulted from heart and blood-circulation problems in Russia in 2005-2011

with real reduction of CVD cases or with imperfect identification (not all cases are identified), insufficient accessibility of medical aid.

In general, outcomes of decease both with rural and city population depends on effective measures adopted by public healthcare system, including accessibility and quality of service at all stages of treatment of CVD.

RF government, in the framework of Health national project has made some steps to develop modern cardiologic aid. For example it increased subsidies from state budget intended to improve accessibility to high-tech medical equipment; federal hospitals adopt new working mode-in accordance with State order, for fulfillment of which leading organizations owned by constituent entities of Russian Federation and municipal bodies can be engaged. Necessary infrastructure in the form of federal centers of high-tech medical technologies intended for mass provision of the most demanded kinds of cardiological medical aid are being built which are able to use technologies of Russian and foreign scientists.

In spite of these measures taken by the government there is a number of unsolved problems in the organization of cardiological aid for population. Studies of medical support of patients with CVD have demonstrated that there are still a lot of faults in investigation and treatment of patients with CVD, including cardio-rehabilitation [8].

High CVD death rate to a great extent is connected with accessibility of cardiological aid which can not be considered as optimal when we look at current organization of work. The seriousness of the accessibility problems is especially felt in rural regions (where proportion of rural population is high). One of such territories is the Republic of Dagestan where this proportion amounts to 54,9% of all population.

The indicators which show accessibility of cardio-rehab services for population are as follows:

- Providing people with cardio-profile beds;
- Availability of cardiologists, cardio-surgeons, assistants;
- Proportion of CVD patients which have passed full course of rehabilitation treatment in rehab resort centers (sanatoriums) and outpatient centers;
- Specific proportion (weight) of the number of realized programs of cardio rehabilitation

Low accessibility of medical rehabilitation is determined by lack of beds for after-treatment and rehab-treatment of cardio profile in state (municipal) health care organizations. Since 2005 availability of beds of cardio profile in cardio-hospitals has increased from 3,8 to 4,2 per 10000 of people.
For example, in 2011 there were only 25 cardiological early treatment centers functioning at the territory of RF and 2880 cardiological doctor’s offices. Total capacity of cardio-hospitals was as follows: 53752 cardiologist and 5806 cardiac and surgeon beds. For period of 2005-2011 total increment in beds of cardiologist profile was 4123 units Figure 2.

Figure 2 demonstrates that in 2005-2011 growth rate of cardiac and surgery beds greatly exceeded growth rate of cardiological beds which can be explained by growth of administrative and technical support for high-tech aid in cardiology.

In the same time even with high costs on technical support and high-tech methods of treatment, it is not possible to reach good results in improvement of life quality, decrease of disability and improvement of survival rate of patients without comprehensive and systematic rehabilitation.

Recently the number of cardiac and surgery and therefore rehab centers has greatly increased in Russia. This process is constantly developing because demand for surgery aid to patients with IHD in RF exceeds existing level for more than 10 times. Nevertheless, accessibility in state rehab system remains on very low level.

Prominent positive results of quality of people’s life were obtained after implementation of large-scale public health care modernization in Republic of Dagestan: death rate connected with blood circulation problems has decreased from 285 to 239 for 100000 people [9]. Increase in accessibility of cardio aid to population was able because in 2008 Republican Center of cardiology and heart surgery was opened which has no precedents either in Dagestan, nor in North Caucasian Federal District. Thanks to opening of center with capacity of 115 beds the patients with different kinds of CVDs which live in Dagestan have possibility to get highly qualified high-tech medical aid not leaving the territory of Dagestan. But in general in Dagestan the situation with availability of beds in stationary cardio hospitals remains problematic and with this indicator we essentially lag behind the average indicator in Russia. Stationary capacities are overloaded and there is lack of beds (much less than in Russia and North Caucasian Federal District).

In the same time Republic of Dagestan is one of regions where rehab treatment beds exceeds average value in Russia and in NCFD (Figure 3).

The most serious problems of accessibility of beds can be observed in mountain regions of Dagestan. Most hospitals are located in non-equipped houses, there are some without elementary conditions and they demand capital repair.
Sanatoriums are of key importance in treatment of patients with CV deceases. Existing system of organization of sanatorium and health-resorts treatment includes facilities of different kinds of ownership, which refer to different ministries and are financed by different sources, unevenly distributed over the territory of Russian Federation because of location of resort places having different administrative/technical support and different level of service [10].

In 2005-2011 the number of resort centers has reduced from 1297 to 1282. Total bed capacity of resort centers in 2005 was 340000 places, in 2011-342000 places [11]. Accordingly to Rosstat data the number of RF citizens who visited resort centers (sanatoriums) in 2005 was 4860 people, in 2011 this number reduced to 3408 000 people. Unfortunately there is no data available on the number of CVD patients who passed through complete course of rehabilitation in rehabilitation sanatoriums and outpatient centers.

Low level of development of resort infrastructure and treatment and rehabilitation base is a real problem which hinders formation of effective system of rehabilitation of patients of cardiological / cardiac and surgery profile in Dagestan. Nowadays in the republic with population of 2914000 there are only 6 resort and health centers which offer programs of rehabilitation treatment for patients with CVD. For comparison: in adjacent Stavropol Territory with population of 2786000 there are 98 resort and health centers.

Insufficient financial state support of resort treatment, excluding this form of medical aid from the list of health insurance, low paying capacity of population, non-rational use of bed capacities in the medical facilities of all forms of ownership resulted in low accessibility of resort treatment to population- and those who really need rehab resort treatment can not get it. The effects of it are lack of stage character of provision of medical aid, high rate of decease and disability.

Accessibility of cardio rehabilitation to a great extent depends on provision of population with employees of medical cardiological profile and real qualification (not diploma but practice). Republic of Dagestan needs qualified medical staff of cardio-rehab profile badly: Table 1 (level of availability of qualified staff is much lower than at average in Russia).

Taking into consideration that more than 37% of Dagestan’s population live in mountains, the key issue here is transport. Low availability of hospital substitutions (daytime stations) in rural regions must be mentioned also.
Finally, one of the reasons of low level of availability of rehab service for Russian population in general and for Dagestan’s population in particular is a negative trend of growth of prices for medical services. Total spending of population on health care have increased from 2,5 to 3,5% of total household costs [12], for resort treatment-from 1.6 to 2%. Spending on drugs stands for ½ of all household costs on health care. Range of drugs used for treatment of CVDs is quite different for rural and city patients. In the second case he doctors have more opportunities to prescribe all wide range of needed drugs, in the second case they are forced to prescribe those drugs which are in the recommended list only.

Therefore analysis of problems connected with rehabilitation of CVD patients shows the necessity of urgent implementation of the following measures on the level of separate region-Republic of Dagestan and in RF on the whole:

- Optimization of bed capacities of cardio-departments and hospitals taking into consideration territorial planning and rate of decease;
- Development and updating (modernization, improvement) of administrative and technical support of medical and resort facilities which provide services of rehabilitation treatment for CVD patients;
- Forming of valuable resort and sanatorium infrastructure, effective use of recreation resources of mountain territories;
- Forming of favourable conditions for life and work of medical staff in rural districts, attracting qualified specialists from other regions of Russia;
- Implementation of telemedicine methods as audio and visual support for physical and psychological rehabilitation of CVD patients.

REFERENCES