



# Assessment of the availability of medical support for athletes in the regions of the siberian federal district

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## Abstract

**Objective of the study** was to analyze the level of accessibility of sports medicine in the regions of the Siberian Federal District.

**Methods and structure of the study.** Content analysis of data on medical services for athletes in the regions of the Siberian Federal District, semi-structured interviews with athletes in the Tomsk region were carried out.

**Results and conclusions.** A large imbalance was revealed in the number of medical centers in different regions of the Siberian Federal District. The share of the number of organizations shows interregional differences in the availability of medical care for people involved in sports, more than twice.

**Keywords:** *medical support, sports of high achievements, social inequality, regional differences.*

**Introduction.** Worldwide, one of the social problems is inequality in access to sports [6]. It is recognized that there are significant differences between rich and poor countries in their ability to provide high performance sports. This is due to the high requirements for the level of technology development for high sports achievements, including medical technologies. Modern sport is characterized by high, sometimes prohibitive loads for the athlete's body. And this, in turn, requires, among other things, adequate medical support for athletes. Under these conditions, the issues of medical support of the training and competitive process become extremely relevant.

The access of Russian athletes to sports medicine specialists is regulated by regulatory documents at the federal level [5], however, there is a geographical inequality of opportunities and conditions regarding the access of athletes at the subregional level of modern Russia. This is explained by the fact that the financing of specialized structures: medical and physical education dispensaries and sports medicine centers

(SMC) is carried out from local budgets, and in a number of regions it is formed according to the residual principle, which leads to a deterioration in the material and technical base of institutions and personnel problems [2]. In this paper, we will consider the inequality of conditions and opportunities in the medical support of sports activities in the regions of the Siberian Federal District, and in more detail in the Tomsk region.

Objective of the study was to analyze the level of accessibility of sports medicine in the regions of the Siberian Federal District.

**Methods and structure of the study.** To analyze the level of inequality and access strategies to specialized medical support for athletes, we analyzed the level of access to medical care for athletes in the regions of the Siberian Federal District, and also evaluated the + medical support system in the Tomsk region on the part of athletes. When collecting data, two methods of sociological science were used. First, to analyze access to sports medicine specialists, we conducted a content analysis of the websites of specialized or-



ganizations in the regions of the Siberian Federal District. Further, these data were compared with the population in the region to calculate the share. In the public domain, no statistics were found on the number of children and adults involved in sports. Replacing the number of athletes by the population imposes some limitations on our data: it can be assumed that the number of people involved in sports in different regions will be different, but due to the very different populations of the regions of the Siberian Federal District, the calculation of the share of sports facilities makes it possible to compare.

In the next phase of the study, in March-May 2022, 12 highly qualified male athletes were interviewed. All surveyed athletes were adults and lived in the city of Tomsk for at least three years. All were engaged in their chosen sport from 8 to 10 years, while each of them had one of the following achievements: 1) membership in the national team of the Russian Federation at different levels (5 people); 2) from 1st to 6th place in the Championship or superiority of Russia, Europe, the World or major international competitions (12 athletes).

**Results of the study and their discussion.** According to the collected data, there is a fairly large variation in the number of regions in the number of organizations that present themselves as involved in sports medicine or have a sports doctor on staff (Table 1). Organizations are quite different: these are well-known medical and physical education dispensaries and sports medicine centers, sports doctors at sports schools, prevention and rehabilitation services offered to athletes by non-core medical centers, municipal, state and private. The largest number of organizations per 100 thousand population is offered by the Novo-

sibirsk and Omsk regions, the smallest number - by the Altai Territory. It is important to note that we do not find a direct relationship between the level of income of the region and the number of organizations, but it is impossible to state what exactly affects regional differences without additional analysis of the cases presented. It can be assumed that a different number of athletes affects, this hypothesis requires additional verification. Again, if we count only specialized institutions (medical and physical education dispensaries, SMCs, doctors at sports schools, etc.), without taking into account private clinics and municipal hospitals, then both leaders in terms of the number of organizations move to the bottom of the list of regions, and to the first place is taken by national republics with a small population. The most critical situation with the provision of athletes with medical support in the Irkutsk region (see table).

It should also be noted that even greater inequality is observed between settlements within regions: only in three out of ten subjects of the federation, the search found institutions outside the regional center. Based on the results of reviewing the data on the availability of medical support for athletes, it can be argued that there is indeed an inequality between regions. For further analysis of the assessment of the accessibility and quality of athletes' access to specialized support, a region was selected with average indicators among all regions of the Siberian Federal District - the Tomsk region.

Absolutely all athletes who took part in the study agreed with the statement that at present, medical support for athletes is a very important and relevant part of sports life, moreover, high-performance sports without medical support turn out to be impossible. In

*Number of medical support organizations for athletes in the regions of the Siberian Federal District*

Region	Population, thousand people	Number of organizations, units	Of these, specialized	Share of organizations (per 100,000 population)	Share of specialized organizations
Altai region	2268	6	3	0,2646	0,1323
Krasnoyarsk region	2856	14	6	0,4902	0,2101
Irkutsk region	2375	9	2	0,3789	0,0842
Kemerovo region	2633	10	5	0,3798	0,1899
Novosibirsk region	2786	21	5	0,7538	0,1795
Omsk region	1904	13	3	0,6828	0,1576
Tomsk region	1070	6	3	0,5607	0,2804
Altai Republic	222	1	1	0,4505	0,4505
Tyva Republic	330	1	1	0,3030	0,3030
Khakassia Republic	532	2	1	0,3759	0,1880



the assessment of sports medicine in the Tomsk region, the vast majority of the surveyed athletes expressed their opinion about the weak level of medical support in Tomsk. The main problems are called the lack of medical personnel specifically for sports and the insufficient level of their qualifications, as well as the lack of sufficient medical equipment.

In particular, the respondents stated: *"In Tomsk, things are not very good with this ... From personal experience, I experienced a shortage of personnel and the low development of sports medicine (athlete, 22 years old)"*, *"sports medicine in Tomsk lags behind other regions of Russia (swimmer, 20 years old)"*. Only two respondents are satisfied with the quality of medical support: *"In Tomsk, things are going well. Restorative procedures can be done in any medical institution... but it is paid (weightlifter, 25 years old)"*. But here athletes are more likely to be satisfied with the general state of medicine, and not with the sports medicine sector.

Answering the question about the frequency of medical examinations in their practice, of the respondents reported that they undergo medical examinations twice a year, and the rest - once a year. According to the order of the Ministry of Health of the Russian Federation of October 23, 2020 No. 1144 n, a medical examination of persons involved in the stage of improving sportsmanship and higher sportsmanship takes place once every six months. Thus, some of the athletes of the city of Tomsk do not receive proper medical support. The reason is the difficulty of access to specialized medical organizations. Almost all respondents undergo medical examinations in medical and physical education dispensaries. One athlete said that he was undergoing it at the district clinic, another said that he was undergoing all examinations at the Federal Medical and Biological Agency in Moscow, because he is currently a member of the Russian national team and is obliged to undergo medical examination there.

The vast majority of respondents are not satisfied with the level of dispensary observation of active highly qualified athletes. Most of the respondents' complaints related to (in decreasing order of the number of votes): lack of medical staff, duration of medical examinations, lack of necessary equipment for examinations, low motivation of staff in helping athletes, low level of medical supervision. The main disadvantages of sports medicine are the lack of laboratories and doctors of certain specialties on the basis of medical and physical education dispensaries: *"I would like to take everything in one building, because, for example,*

*you need to donate blood at another point in the city, ENT in another, in order to pass everything you sometimes run a marathon (weightlifter, 24 years old)"*, *"... And this is all the time ... and money too (athlete, 24 years old)"*. An important problem of sports medicine in Tomsk, according to the respondents, is also the lack of modern equipment, which does not allow full monitoring of the health status of athletes at all periods of their sports training.

In foreign countries that are leaders in the Olympic movement, medical care for sports teams is organized and financed by sports clubs and federations [4]. Therefore, organizations and sports doctors that have signed a contract with the federation are interested in providing the necessary assistance and advice to athletes and coaches.

Thus, analyzing the data obtained during the interview, we can conclude that the athletes are not satisfied with the quality of medical examination in the city of Tomsk. This is probably due to the fact that in Tomsk there is only one medical and physical education dispensary out of the medical organizations available for free, and therefore there is no competition in the field of sports medicine, which affects the quality of medical support for athletes. The same situation, as in Tomsk, is also observed in other regions of Russia, for example, in the Omsk region, Khanty-Mansi Autonomous Okrug [3], and Primorsky Krai [1].

**Conclusions.** Data on medical support organizations for athletes in the regions of the Siberian Federal District show a large imbalance in the number of medical centers, the share of the number of organizations shows differences in the availability of medical care for people involved in sports, for some regions more than two times. Studies show that the reason for this is the transfer of funding for these structures to the local level. Many municipalities fund their work on a leftover basis. However, our data indicate that there is no relationship between the level of income in the region and the provision of medical care to athletes. The level of satisfaction of athletes in a region with an average level of access to medical support is quite low.

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