

DOI: <https://doi.org/10.32652/spmed.2023.1.3-6>

Improving medical provision for the organization of physical culture and sports in Kazakhstan

**Zh. M. Andasova¹, M. K. Zhukesheva¹, T. Tulendieva²,
A. B. Nurmatov²**

¹ Kazakh National Medical University named after S. Asfendiyarov

² National Center for Sports Medicine and Rehabilitation

Abstract. The article presents a review of modern foreign publications, examines the state of the system of medical provision for physical culture and sports in the Republic of Kazakhstan, as well as provides recommendations for improvement and modernization of its organizational structure *Objective.* Improvement of the system of medical provision for physical culture and sports in the Republic of Kazakhstan. *Methods.* Analysis of modern scientific publications.

Results. Today, the issue under study is urgent. To achieve high sports performance, a clear organizational structure, integration of all participants in the sports training process, scientifically based systematic monitoring of health level and functional status, an innovative system of recovery and improvement of the athlete's work capacity, and information and technological provision are necessary. Therefore, the main objective is to create a concept for the expansion of medical and physical culture services in the Republic of Kazakhstan, to develop and implement a program for improving the medical provision for sports in the Republic of Kazakhstan.

Keywords: medical provision for physical culture, sports, wellness.

Поліпшення медичного забезпечення організації фізичної культури і спорту в Казахстані

Ж. М. Андасова, М. К. Жукешева, Т. Тулендієва, А. Б. Нурматов

¹ Казахський національний медичний університет імені С. Асфендіярова

² Національний центр спортивної медицини та реабілітації

Анотація. У статті представлено огляд сучасної зарубіжної літератури, де розглянуто питання стану системи медичного забезпечення фізичної культури і спорту у Республіці Казахстан, а також рекомендації до вдосконалення та модернізації її організаційної структури. *Мета.* Вдосконалення системи медичного забезпечення фізичної культури та спорту Республіки Казахстан. *Методи.* Аналіз сучасної наукової літератури. *Результати.* На сьогодні нагальним є вирішення досліджуваного питання. Для досягнення високих спортивних результатів необхідні чітка організаційна структура, інтеграція всіх учасників спортивно-тренувального процесу, науково обґрунтований системний моніторинг рівня здоров'я та функціонального стану, інноваційна система відновлення та підвищення працездатності спортсмена, інформаційно-технічне забезпечення. Тому головним

завданням є створення концепції розширення медико-фізкультурних послуг у Республіці Казахстан, розробка та реалізація програми вдосконалення медичного забезпечення спорту Республіки Казахстан.

Ключові слова: медичне забезпечення фізичної культури, спорт, оздоровлення.

According to the report on the results of 2021, the number of those systematically involved in physical culture and sports has increased in the country – from 30,6 % to 34,2 %. By the end of 2021, there are expected to be over 144 thousand sports sections in schools and organizations of additional education across the country, covering 2,048 thousand children, with 68.9 thousand sections in rural areas covering 2,572.8 thousand people. In particular, 49.9 thousand sports clubs operate in general education schools, serving 1,371,318 students, or 40,2 % of the total number of school-children. The total number of youth clubs and youth clubs of physical fitness participants has increased from 180,741 in 2019 to 220,400 in 2021. Simultaneously, the number of youth clubs increased from 579 in 2019 to 652 in 2021, while youth clubs of physical fitness participants increased from 107 in 2019 to 138 in 2021. There are 748 colleges and 126 higher educational institutions in the republic, in which more than 1 million students study, more than 437 thousand students are involved in physical education, which is 43 % of the total number of students.

By the end of 2021, technical and vocational education organizations will have 9437 sports sections (football, volleyball, Kazakh kuresi, boxing, chess, and so on). There are 101 sports clubs and 721 sports sections in 103 civil universities (boxing, wrestling, volleyball, basketball, football, etc.), sports coverage in colleges is 50 % (over 231 thousand students), and 29,3 % in organizations of higher and postgraduate education (more than 177 thousand students). The Accessible Sports project has been piloted in seven Kazakhstani cities since May 2022. (Nur-Sultan, Almaty, Shymkent, Aktau, Taldykorgan, Petropavlovsk, Semey). Nordic walking, running, gymnastics (yoga, fitness), street work, cross-country skiing, table tennis, and mass skating are all part of the program.

Popularization of sports in the countryside – sports days are held on a regular basis for the “Ak bidai” rural population. Almost every region participates in them. The games’ schedule includes 14 sports such as kazaksha kures, presidential all-around, audaryspak, table tennis, and others. The implementation of the republican project “Aulafit” to introduce physical activity into the lives of older people has begun. The project was completed in six regions, covering over 45,000 people, by 2021.

The project’s goal is to give the general public, including the elderly, the opportunity to participate in physical culture and sports under the supervision of instructors and trainers on a daily basis in the courtyards of residential complexes within walking distance.

Physical culture and sports are popular among people with disabilities. By the end of 2021, there will be 705 thousand people with disabilities in the country (3.68 % of the total population), with 319,090 (45 %) having no contraindications to physical education and sports. In the republic today, there are 14 sports clubs and three schools for people with disabilities (sports clubs: in the cities of Almaty, Shymkent, in Turkestan, Zhambyl, WKO, Mangistau, North Kazakhstan, Pavlodar, East Kazakhstan, Akmola, Kostanay, Aktobe, Atyrau and Kyzylorda regions, sports schools: Astana, Karaganda and Almaty regions).

However, there is a small increase in the number of people who are systematically involved in physical culture and sports: from 32,811 in 2019 (11,7 % of the total number of people who do not have contraindications for physical culture and sports) to 48,565 in 2021 (12,7 %).

Kazakhstan currently cultivates 176 sports: 45 summer Olympic, 13 winter Olympic, 28 Paralympic, 10 national, 80 non-Olympic sports.

At the end of 2021, 386,519 children and adolescents are involved in 481 children and youth sports schools (including 143 specialized ones). 13,666 trainers-teachers work with them (about 30 children per 1 trainer).

Currently, in the sports industry, medical activities are carried out at the republican level by the State Enterprise “Center for Sports Medicine and Rehabilitation” (hereinafter referred to as CSMR), at the regional level – 6 medical and physical education dispensaries (hereinafter referred to as PED) (in Akmola, Almaty, Pavlodar, East Kazakhstan, Turkestan regions and the city of Shymkent).

The presence of PED in each region implies timely monitoring of the health status of athletes in the field. At the same time, in three regions (Kyzylorda, Zhambyl, Kostanay) the functions of the PED are performed by structural divisions (medical departments) of sports organizations, while in 8 regions of the republic there are no PED (in Atyrau, Aktobe, West Kazakhstan, Mangistau, North Ka-

zakhstan, Karaganda regions, cities of Almaty and Astana).

Existing problems in the organization of medical support for PE and sports: issues of high-quality medical, biological and pharmaceutical support for athletes in the country that need to be addressed in the near future are not being resolved: a specialized or separate building, modern stationary and portable equipment, methods and approaches in functional testing and diagnostics of athletes with the subsequent drawing up or adjustment of plans for the preparation of athletes, legal acts regulating activities in the field of sports medicine. There is a shortage of specialists with a narrow focus in the field of sports medicine (sports doctor, traumatologist, rehabilitation specialist, nutritionist, sports medicine physiotherapist, sports psychologists, massage therapists, etc.).

Each element of the modern sports medical support system performs its own functionality: PED – clinical examination, examination, admission, CSG – to provide information to a sports doctor and coach, Sports doctor – operational control. There is no link for monitoring, analysis, prevention, for timely correction, there is no analytics, a single information center (fig. 1).

Thus, it is possible to single out the main problems in the organization of the medical support system, shown in Table 1.

To modernize the medical support system for PE and sports in the Republic of Kazakhstan, a single center for medical support for PE and sports, such as the Republican Center for Sports Medicine, must be established, which can provide organizational and methodological guidance and coordination of the activities of healthcare organi-

TABLE 1 – The main problems of organizing the system of medical support for sports and sports

Insufficiently qualified personnel, including weak management in the organization of the medical support system for sports and sports
Lack of experts in various areas of sports medicine Lack of scientific and expert support
Decentralization of medical and physical education service
Lack of legal regulation of the PD service
Weak material and technical base of the PED, including in the regions
Imperfection of legislation in the field of sports medicine / lack of regulations for the activities of a sports doctor

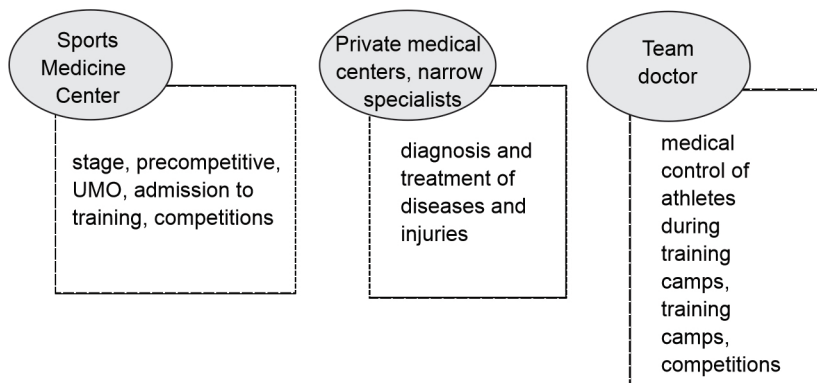


Figure 1 – The existing model of medical support for PE and sports

zations in sports medicine, as well as medical and biological support for athletes of national teams and their immediate reserve, in Kazakhstan. Table 2 depicts the organizational structure of the system of medical support for physical culture and sports.

The management model of the medical support system assumes:

- Multidisciplinary approach to the management of sports training of athletes,
- Integration and communication,
- A clear system of clinical guidance and external professional evaluation,
- Regulation of types of medical activities,
- Evaluation of the effectiveness of medical support for sports.

To optimize the work of the system of medical support for physical culture and sports, organi-

TABLE 2 – The structure of medical support for FC and sports

Republican Center / Agency for Biomedical Support of Sports Expert Council / medical information and analytical database of people involved in physical culture and sports	Organizational and methodological guidance and coordination of activities of healthcare organizations in sports medicine. Medical and sanitary and biomedical support of athletes of national teams Collection of information and analysis, making a collegial decision on the admission of athletes
Research Institute of Sports	Scientific and practical work support, Expert evaluation of sports medicine areas – sports nutrition, sports pharmacology, performance monitoring, recovery system
Republican Center for Sports Medicine	UMO athletes Organization and conduct of operational, current, stage, pre-competitive control, UMO, admission to training, national and international competitions
Regional sports medicine centers	Clinical examination, medical control of those involved in PE and sports in the regions, including admission to sports, sports selection

zational work is to be done on the development and implementation of screening technologies in sports medicine; creation of a medical information and analytical database of people involved in physical culture and sports, development of diagnostic and treatment protocols for sports pathology, regulation of the activities of a sports doctor.

A multidisciplinary approach is a team game for results, and it provides for the participation and interaction of the entire athlete's staff, and this makes it possible to optimize the process of sports training and ensure the best result. An integrative approach involves combining competencies from different specialists in the field of sports into a single practical concept based on long-term observation, which implies constant dynamic control,

identification of weaknesses with synchronous correction.

Conclusion on measures to optimize the medical support of FC and sports in the Republic of Kazakhstan:

1. Development of a **CONCEPT** for the development of medical and physical education services in the Republic of Kazakhstan.

2. Development and implementation of a **PROGRAM** for improving the medical support system for sports and sports in the Republic of Kazakhstan for 2022-2027.

3. Modernization of the organizational structure of the sports medicine service.

4. Implementation of the **MODEL** of management of the system of medical support for sports and sports.

Надійшла 28.02.2023