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## On the history of medical rehabilitation in Russia

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The main stages in the development of medical rehabilitation are reviewed. Medical science's successes and the sharp increase in the number of people with disabilities in the 20th century as a consequence of numerous wars and conflicts led to the need to rethink society's attitude towards them, and the emergence of rehabilitation science as an independent field of medicine. In Russia, the creation of structures for providing rehabilitation assistance to the population began in the Soviet period (the 1970s). The problems of rehabilitating the incapacitated and disabled were initially considered through the lens of a particular medical model, according to which the disabled person was recognized as someone being unable to work. In the Russian Federation, since 1995, a state system of medical rehabilitation has been created, the development of which is largely determined by perfecting the legislative framework. The modern three-level model of rehabilitation and habilitation reflects changes in state policy in the social sphere, the purpose of which is not only to eliminate or compensate for functional disorders, but also to achieve the optimal level of biopsychosocial functioning of persons with disabilities and their active participation in the life of society.

Keywords: medical history, medical rehabilitation, complex use, person with disabilities, habilitation

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"Rehabilitation", a term that has long been used in legal practice [1], is the recovery of former capabilities (qualities). Beginning in the Middle Ages governmental structures concentrated their efforts on isolating the ill (primarily those with infectious diseases) and the disabled. The

and the drastic increase of disabled people as a consequence of numerous wars and conflicts on the other required that society reconsider its attitude towards disabled people and resulted in the emergence of rehabilitation science as a new field of medicine.

development of medical science on the one hand

The history of medical rehabilitation dates back to World War I, which caused millions of people to become disabled. Governments

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in many countries felt the need to qualitatively change existing systems of medical and social assistance in order to allow the disabled to return to a normal, active life. These temporarily incapacitated people of all ages, because of their strong biological potential, aspired to lead healthy, happy lives and not spend their days in hospitals and hospices. In 1919, European countries along with Russia formulated the foundations of the modern rehabilitation principles. Britain created orthopedic hospitals for treating disabled veterans that broadly used occupational therapy, which was managed by qualified specialists (workers). This therapy was applied in Russia, in particular in the orthopedic hospital in Saint Petersburg and the Medical-Mechanical Institute in Kharkov, among others. Occupational therapy was also used in psychiatric practice as a means for treating the mentally ill. Medical pedagogy also began its evolution, having an enormous influence not only on the rehabilitation of the mentally ill, but also on that of the somatically ill. The separation of rehabilitation as a medical field began in the 1920s. Rehabilitation saw its broadest application during World War II, which resulted in an enormous number of wounded people, people who were physically, mentally and spiritually crippled and thus needed medical assistance and psychological and social support. In the period of the World War II 70% of all wounded returned to a normal condition, an achievement also for the rehabilitation services in which therapists had begun playing a greater role [1, 2].

Rehabilitation developed significantly after World War II. In medicine the idea of rehabilitation was first applied in tuberculosis cases: in 1946 a convention was held in Washington on the rehabilitation of tuberculosis patients. In 1947 the American Board of Medical Specialties officially proclaimed rehabilitation as an independent discipline [3].

Various countries began establishing rehabilitation services and centers; rehabilitation became an objective for social organizations and branched into a separate discipline [1, 3].

However, despite the broad use of this term in international medical science and practice, with

respect to the essence of rehabilitation, its goals and tasks, a unanimous opinion was not reached. In some countries, rehabilitation meant only the restoration of health; in others it also implied the restoration of work capacity; in still others it meant such additional measures as providing material assistance to victims [1, 3, 4].<sup>2</sup>

In many countries the problem of rehabilitating the incapacitated was considered to be of great importance. In the developed Western countries rehabilitation assistance to victims evolved after authorities recognized the economic advantages of rehabilitation. The assistance was provided at the expense of those who worked (insurance companies, corporations). By this time Western countries had succeeded in solving the private problems of rehabilitation, such as the development of architectural solutions and facilities for facilitating the work and life of the rehabilitated, and the creation of special rehabilitation centers [1, 3].<sup>3</sup>

In the developing countries the organization of rehabilitation assistance occurred on a very low level, owing to their low level of economic development. This condition impeded the allotment of substantial material resources for the development of rehabilitation services. In many such countries medical-rehabilitation institutions were created upon the initiative of various nationwide and social organizations that employed foreign staff and were financed from abroad [1].<sup>4</sup>

Organizational events in the field of rehabilitation began to appear on an international level in 1958 after the first session of WHO experts on medical rehabilitation.<sup>5</sup> The efforts of the international organizations that worked on rehabilitating the disabled under the aegis of the UN and WHO were aimed at establishing services in the developing countries and training national staff members in rehabilitation. The WHO Expert Committee on Rehabilitation saw the necessity of a combined and coordinated use of medical, social, educational and professional events, including the training and retraining of the disabled, to enable the rehabilitated to achieve

<sup>&</sup>lt;sup>1</sup> See Expert committee on medical rehabilitation. First rep. Geneva: WHO, 1958.

<sup>&</sup>lt;sup>2</sup> Ibid.

<sup>&</sup>lt;sup>3</sup> Ibid.

<sup>&</sup>lt;sup>4</sup> Ibid.

<sup>&</sup>lt;sup>5</sup> Ibid.

the highest possible level of functional activity [5–7].<sup>6</sup>

A resolution adopted by the 9th Congress of Health and Social Security Ministers of the Eastern European Countries in Prague (1967) offers the following definition: "Rehabilitation is a system of governmental, socio-economic, medical, professional, pedagogical and other activities aimed at preventing the development of pathological processes that lead to a temporary or significant loss of work capacity and the effective and early return of the ill and disabled (children and adults) to society and to socially beneficial work" [1].

In the USSR, the organization of structures that provided rehabilitation assistance to the population began in the 1970s on the initiative of the health agencies. The rehabilitation of the incapacitated and individuals with limited activity was initially viewed from a medical model, according to which a disabled person was one who had lost his work capacity. The practice of rehabilitating the incapacitated was seen as a concern of the state and was regulated by corresponding governmental legislative acts and regulations. The constitution guaranteed free, publically available medical assistance and material support for people who had lost their work capacity, opening broad opportunities for the future development of rehabilitation. The goal of rehabilitation was to help the patient recover and provide him with assistance in his recovery or to develop his professional skills in consideration of the trauma or illness from which he was suffering.

The creation of the state system of rehabilitative hospitals for heart attack patients initiated by E.I. Chazov played an important role in the development of rehabilitation. It was a model for introducing rehabilitation principles and methodologies into other fields of medical science [8–11].

In the opinion of G.S. Yumashev and K. Renker [12], there were several varieties of rehabilitation: firstly, the adaptation of the rehabilitated patient to his previous workplace;

secondly, re-adaptation to work at a new workplace with a change of working conditions; thirdly, work at a new place after obtaining a new qualification, one similar to the former specialty but with a smaller work load; fourthly, if it was impossible to realize the above-mentioned points, complete requalification of the rehabilitated patient and a return to his previous enterprise; fifthly, requalification in the rehabilitation center and a new job appropriate to his new specialty.

These forms of rehabilitation were the basis for the USSR's coherent system for rehabilitating the ill and the disabled. In terms of outpatient clinics, a series of rehabilitative treatment offices (physiotherapy, psychotherapy, mechanotherapy, therapeutic physical training, etc.) were united into a network of rehabilitation treatment departments. The departments included health groups (universities of health) that treated not only the ill and recovered, but also the healthy population. Such groups had a rehabilitative and preventive function. In terms of stationary clinics, both independent rehabilitation departments and specialized hospitals for the rehabilitation treatment of certain categories of ill people were established. They included the hospitals that were organized in the post-war years for rehabilitation treatment of the wounded and disabled during the World War I. In the gradual rehabilitation of individuals who had heart attacks, great importance was given to the free 24-day treatment in cardiological sanatoriums created especially for that purpose.

**Important** specialized rehabilitation centers (all-union, republican) were created on the basis of leading scientific research institutes (with a pathology profile). Moreover, rehabilitation societies were established for specialists (scientific-practical societies) and for the disabled (publically producing societies). Scientific-practical societies of rehabilitation doctors who worked in several cities in the country (Moscow, Leningrad) united doctors with various specialties, those who conducted rehabilitation work with the ill and the disabled. Rehabilitation sectors were created in the scientific societies (allunion, republican and regional) of doctors with various medical specialties (surgical, therapeutic, pediatric, etc.). Joint sessions for societies with various specialties were conducted to discuss relevant issues.

<sup>&</sup>lt;sup>6</sup> See Expert committee on medical rehabilitation. Techn. rep. ser. Geneva: WHO, 1969. No. 419; Disability and rehabilitation status review of disability issues and rehabilitation services in 29 African Countries. Geneva: WHO, 2004.

In each Soviet republic, volunteer public organizations were created for the disabled (the blind and other citizens). Having their own material-technical and financial bases, the societies aimed to enable the blind and other citizens to perform socially beneficial work, to improve their cultural and practical existence, to help increase their educational and professional level and to give them an active social life.

The economically developed countries achieved significant success in this field at a time when in Russia, during the formation of a new state system (the collapse of the USSR, the Perestroika), the coherent medical rehabilitation system was stagnating (1985–1991). International recommendations on organizing and using the medical rehabilitation system were limited, at times insignificant, when applied to Russian conditions. However, in the end, Russia was able to create a new medical rehabilitation system.

The history of medical rehabilitation in Russia is reflected in the transformation of the name of the leading scientific-research institute (SRI) in this field:

1920 – The Physio-mechanoorthopedic Institute;

1922 – The State Institute of Physiatrics and Orthopedics;

1935 – The State Institute of Physiotherapy and Physical Education;

1938 – The State Physiotherapy SRI;

1958 – The Central SRI of Health Resort Therapy and Physiotherapy;

1988 – The All-Union Scientific Center for Medical Rehabilitation and Physical Therapy;

1991 — The Russian Scientific Center for Rehabilitation and Physiotherapy;

1998 — The Russian Scientific Center for Rehabilitation Medicine and Health Resort Therapy (RSCRMHRT).

Rehabilitation Medicine (RM) as a scientific field is reflected in the scientific discipline (14.00.51) "Rehabilitation medicine, therapeutic physical education and athletic medicine, physiotherapy and health resort therapy." Also, two independent scientific disciplines were abolished: "Therapeutic physical education and athletic medicine" (14.00.12) and "Physiotherapy and health resort therapy" (14.00.34).

Since 1995 the Russian Federation has been in the process of forming a state medical

rehabilitation system. The development of the medical rehabilitation service, as of any other medical service, is largely determined by legislative developments. The normative-legal base that regulated medical rehabilitation in Russia required significant improvement.

The attachments to the Russian Federation Health Ministry Decree No. 25 from January 25, 1999 "On the measures for improving medical assistance to patients suffering from cerebral circulation disorders" contain provisions for hospital rehabilitation departments, outpatient departments (offices) for rehabilitation treatment and specialized sanatoriums for aftercare. Neuro-rehabilitation or the rehabilitation of the neurologically ill is a branch of medical rehabilitation that was formed only recently. The first neuro-rehabilitation department in Russia was established in 1964 at the SRI of Neurology at the USSR Academy of Medical Sciences (AMS) on the initiative of the institute's directors, USSR AMS academicians N.V. Konovalov and E.V. Schmidt. The institute's rehabilitation service was headed by the leading specialists professors L.G. Stolvarov, E.S. Bein and G.R. Tkachev. The Russian Federation Health Ministry Decree No. 534 from August 22, 2005 "On the measures for improving the organization of neuro-rehabilitation assistance to patients after strokes and traumatic brain injury"8 establishes the legal prerequisites for organizing the centers (or departments) of speech pathology and neuro-rehabilitation activity and wards of early neuro-rehabilitation.

In 2003, the Russian Federation Health Ministry issued decree No. 297 on a new specialty, "the rehabilitation medicine doctor" (040132).9 A series of events for improving medical

<sup>&</sup>lt;sup>7</sup> See On the measures for improving medical assistance to patients suffering from cerebral circulation disorders (electronic resource): the Russian Federation Health Ministry Decree No. 25 from January 25, 1999. Accessible with the Garant system.

<sup>&</sup>lt;sup>8</sup> See On the measures for improving the organization of neuro-rehabilitation assistance to patients after strokes and traumatic brain injury (electronic resource): Russian Federation Health Ministry Decree No. 534 from August 22, 2005. Accessible with the Garant system.

<sup>&</sup>lt;sup>9</sup> See On the rehabilitation medicine doctor (electronic resource): Russian Federation Health Ministry Decree No. 297 from July 1, 2003. Accessible with the Garant system.

rehabilitation can be seen in the "Concept of developing the health system and medical science, the tasks for 2001–2005 and until 2010". The individual rehabilitation program form was confirmed with the purpose of enabling citizens exercise their right to rehabilitation. <sup>11</sup>

In Europe in 2007, according to the instructions of the International Society of Physical and Rehabilitation Medicine, the leading specialists in this field — C. Gutenbrunner, A. Ward and A. Chamberlain — formulated a strategy for the development of rehabilitation and physical medicine that was called *The White Book on Physical and Rehabilitation Medicine* [14].

The idea of "medical rehabilitation" was first given legislative form in the Russian Federation by Article 40 "Medical rehabilitation and Sanatorium-Health Resort Treatment" of Federal Law No. 323-FZ "On the foundations of health protection of Russian Federation citizens" from November 21, 201112 as a "system of medical and psychological activities designed to fully or partially restore the disorders and (or) compensate the lost functions of the affected organ or organism system, to support the organism's function in the course of completing the intensely developed pathological process or the aggravation of a chronic pathological process in the organism, to prevent, timely diagnose and correct the possible functional

disorders of damaged organs or organism systems, to prevent and reduce the degree of possible disability, to improve the quality of life, to preserve the patient's work capacity and his social role". Article 40 determines the order for conducting medical rehabilitation in the field of cardiology, neurology, traumatology, oncology and perinatology. It proclaims the basic principles for organizing the rehabilitation system: phasing, multi-disciplinarity, feasibility, individuality, continuity, accessibility, focus on a clearly formulated goal, informing the patients and forming in them "correct" expectations of the positive effects of rehabilitation assistance. The document also mentions that "medical is conducted rehabilitation in medical organizations and includes the comprehensive use of natural treatment factors, medicine, nonpharmacological treatment and other methods, that is, the idea of medical rehabilitation and health resort-sanatorium treatment is consolidated". Physiotherapy, physical education treatment and pharmacological treatment are parts of medical rehabilitation and are inseparably related to one another. The list of medical and pharmaceutical occupations that was confirmed by Russian Health Ministry Decree No. 1183n from December 20, 2012, includes the occupation "medical rehabilitation doctor" and "medical rehabilitation nurse".13

The state program "The Development of the Health System", adopted by the Russian Federation Health Ministry Board on September 28, 2012, 14 with the 5th sub-program "The Development of Medical Rehabilitation and Sanatorium-Health Resort Treatment, including for children", says that health recovery assistance for patients is provided in planned order within the framework of primary health and specialized, including highly technological, medical aid. This document also says that medical rehabilitation must begin as soon as possible, and not at the 2nd or 3rd phase of treatment. The facilities where it should be conducted are listed as

The See On the course of the realization of the concept of developing the health system and medical science, the tasks for 2001-2005 and until 2010 (electronic resource): decision by the Russian Federation Health Ministry made on March 20–21, 2001 (Protocol No. 6). Accessible with the Garant system.

<sup>&</sup>lt;sup>11</sup> See On the procedure and conditions for recognizing a disabled individual (electronic source): Russian Federation Government Decree No. 95 (edited September 4, 2012) from February 20, 2006, available on the Garant system; On the confirmation of the forms for individual rehabilitation program, individual rehabilitation of a disabled child programs handed out by the federal governmental institutions for medical-social assessment, the order of their development and realization (electronic resource): Russian Federation Health Ministry Decree No. 379 from August 4, 2008. Accessible with the Garant system.

<sup>&</sup>lt;sup>12</sup> See On the foundations of health protection of Russian Federation citizens (electronic resource); Federal Law No. 323-FZ from November 21, 2011 (edited on June 25, 2012). Accessible with the Garant system.

<sup>&</sup>lt;sup>13</sup> See On the confirmation of the list of medical and pharmaceutical occupations (electronic resource): Russian Federation Health Ministry Decree No. 1183 from December 20, 2012. Accessible with the Garant System.

<sup>&</sup>lt;sup>14</sup> See The Russian Federation state program "The Development of the Health System", adopted by the RF Health Ministry Board on September 28, 2012.

rehabilitation wards, as well as wards and offices in a specialized branch, rehabilitation centers, clinics and sanatorium-health resort institutions. Rehabilitation and expert technologies must be in line with the International Classification of Functioning, Disability and Health, which was adopted at the 4th WHO Assembly. 15 Proceeding from the comprehensive evaluation of disability, which is based on the analysis of the citizen's clinical-functional, social-practical, professionaloccupational and psychological information, as well as his rehabilitation potential, in the course of the clinical-assessment diagnostics an individual rehabilitation program is formed and its implementation becomes mandatory for the corresponding government agencies, local self-regulation agencies and organizations, independently of the organizational-legal forms and forms of property.

The order of medical rehabilitation organization introduced by Russian Federation Health Ministry Decree No. 1705n from December 29, 2012, regulates issues related to the organization of medical rehabilitation for adults and children based on the comprehensive use of natural treatment factors, pharmacological and non-pharmacological therapy and other methods.<sup>16</sup> The decree defines three phases of medical rehabilitation, depending on the gravity of the patient's condition: the first phase: providing assistance in the acute period of the illness or trauma in the reanimation or intensive therapy units. The second phase: supporting the illness or trauma in the early rehabilitation period, in the late rehabilitation period, in the period of residual manifestations of the illness and in the course of chronic illness when not aggravated in the stationary conditions of medical organizations. The third phase: assistance in the early and late rehabilitation period, in the period of residual manifestations of the illness, in the course of chronic illness when not aggravated by the assistance provided by the medical organizations that offer medical assistance in outpatient conditions and by medical teams coming to the patient's home. The activities are conducted with the prospect of restoring the functions (rehabilitation potential) confirmed by the examination results.

Providing the methodological methodical continuity of the various phases of the rehabilitation process and their complementarity creates the basis for the modern horizontal-integral model of rehabilitation assistance. The final goal of the activities carried out to develop medical rehabilitation is the creation of a system of medical organizations of both private and government property that will provide a comprehensive, staged, continual, scientifically based assistance for medical rehabilitation. Information provided by evidence-based medicine will help identify the patient's individuality at the previous or new level of his integration in society.

The term "the rehabilitation of the disabled" was commonly used after the adoption of Federal Law No. 181-FZ "On social protection of the disabled in the Russian Federation". 17 According to Article 9, the rehabilitation of the disabled is a system and process of full or partial recovery of the disabled's capabilities to conduct practical, social and professional activity. On November 28, 1990, the USSR Health Ministry Board decided to confirm the "Principles and Concept of the Development of Medical-Social Rehabilitation of the Ill and the Disabled" developed by the All-Union Scientific Center for Medical Rehabilitation and Physical Therapy. After the Russian Federation ratified (on September 24, 2008) the UN Convention "On the Rights of the Disabled", 18 the term "habilitation" was added to Article 9. Chapter III of the RF Federal Law No. 181-FZ "On the social protection of the disabled in the Russian Federation". The article also provides a definition of this term: "habilitation" of the disabled is a system and process of forming practical, social, professional and other capabilities that the disabled lack. Russian Federation Labor and Social Protection Ministry

<sup>&</sup>lt;sup>15</sup> International Classification of Functioning, Disability and Health. Geneva: WHO, 2001.

<sup>&</sup>lt;sup>16</sup> See On the order of medical rehabilitation organization (electronic resource): Russian Federation Health Ministry Decree No. 1705n from December 29, 2012. Accessible with the Garant system.

<sup>&</sup>lt;sup>17</sup> See On social protection of the disabled in the Russian Federation (electronic resource). Federal Law No. 181-FZ from November 24, 1995 (edited on December 29, 2015). Accessible with the Garant system.

<sup>&</sup>lt;sup>18</sup> See the UN Convention On the Rights of the Disabled (adopted by the UN General Assembly Resolution 61/106 on December 13, 2006). Accessible with the Garant system.

Decree No. 528 from July 31, 2015<sup>19</sup> confirms the Procedure for Developing and Realizing the Individual Program for the Disabled's Rehabilitation or Habilitation and the Individual Programs for the Disabled Child's Rehabilitation or Habilitation provided by the federal medical-social assessment institutions and their forms.

September 1, 2015, 13 Russian Federation subjects (the Moscow region, Saint Petersburg, the Leningrad Region, the Nizhny Novgorod Region, the Sverdlovsk Region, the Samara Region, the Republic of Tatarstan, the Krasnoyarsk Territory, the Primorsky Territory, the Tver Region, the Republic of Chuvashia, the Ivanovo Region and the Perm Territory) began implementation of the pilot project called "The Development of the System of Medical Rehabilitation in the Russian Federation" in accordance with the State Program for Health Care Development until 2020.20 The project is realized in providing medical assistance in one of the areas chosen autonomously by the Russian Federation subject participating in the pilot project: neurology, cardiology or traumatologyorthopedics. With the aim of fully detailing the project's organizational process, each area defines the patient models that maximally reflect the particularities of medical rehabilitation:

- acute cerebrovascular disorders (neurology);
- degenerative-dystrophic illnesses of the hip joint with complete endoprosthesis of the joint (traumatology-orthopedics);
  - acute heart attack (cardiology).

The condition of being ill or disabled, and the activity of the service for rehabilitating individuals

who have limited capacities and who need social support, constitute an important indicator of social health and health care [13].<sup>21</sup>

The change of government policy in the social sphere that occurred recently is primarily conditioned by society's aspiration to provide individuals of limited capabilities with equal opportunities to exercise their constitutional rights and freedoms [15].<sup>22</sup> The complexity of solving the problem of rehabilitation assistance requires consolidated efforts from all of civil society. In this regard, a positive step is the incipient activation of the non-governmental social organizations and the strengthening of the interactivity between governmental agencies and the non-governmental social organizations whose activity is designed to improve social assistance for individuals with limited capabilities.

The Russian Federation has a social disability model that takes into consideration not only the medical aspect, but also the person's functioning in his environment, the possibility of autonomous living, economic independence and the creation of accessibility conditions. Technical devices are also used with the aim of compensating or removing significant incapacities: technical rehabilitation aims to create an "unhindered environment" for these citizens.<sup>23</sup>

As Russia became more aware of the need to ensure an unhindered environment for individuals with limited capabilities and to form the concept of "independent life", the attitude towards this category of people changed after the adoption of the social disability model. The modern paradigm of the socio-cultural attitude towards individuals with limited capabilities has a multi-faceted

<sup>&</sup>lt;sup>19</sup> See On the confirmation of confirmed the Procedure of Developing and Realizing the Individual Program for the Disabled's Rehabilitation or Habilitation, the Individual Programs for the Disabled Child's Rehabilitation or Habilitation provided by medical-social assessment federal government institutions and their forms (electronic resource): The Russian Federation Labor and Social Protection Ministry Decree No. 528 from July 31, 2015. Accessible with the Garant system.

<sup>&</sup>lt;sup>20</sup> See Letter from Deputy Health Minister T.V. Yakovlev from 14.08.2015 No. 17-5/10/2-4691 "On conducting the pilot project 'The Development of the System of Medical Rehabilitation in the Russian Federation'"; letter from First Deputy Health Minister I.N. Kagramanyan from 26.08.2015 No. 16-2/10/2-4972 "On conducting the pilot project 'The Development of the System of Medical Rehabilitation in the Russian Federation.'"

<sup>&</sup>lt;sup>21</sup> See the UN Convention On the Rights of the Disabled (adopted by the UN General Assembly Resolution 61/106 on December 13, 2006). Accessible with the Garant system. <sup>22</sup> See: On the foundation of social service for Russian Federation citizens (electronic resource): Federal Law No. 442-FZ from December 28, 2013 (edited on July 21, 2014 No. 256). Accessible with the Garant system.

<sup>&</sup>lt;sup>23</sup> See On the federal list of rehabilitation activities, technical rehabilitation means and services offered for the disabled (electronic resource): Russian Federation Directive No. 2347-r from December 30, 2005. Accessible with the ConsultantPlus system; On the confirmation of the Russian Federation State Program "Accessible Environment" for 2011–2020 (electronic resource): Russian Federation Government Decree No. 1297 from December 1, 2015. Accessible with the Garant system.

nature in which the humanistic spirit prevails and which is expressed through social tolerance and respect for individuals with limited capabilities [16–19].

Thus, the particularity of medical rehabilitation science and practice is the relatively recent introduction of this field of modern medicine, which is a component of the complex rehabilitation process. The modern ideology of

medical rehabilitation in the Russian Federation, based on WHO recommendations, is an active process whose aim is not only the removal or compensation of functional disorders that occur as a result of illnesses, traumas or defects, but also the achievement of an optimal level of the individual's biopsychosocial functioning, the fulfillment of his civic duties and his active participation in society.

## REFERENCES

- 1. Petrovskiy B.V. *Bol'shaya meditsinskaya entsiklopediya* [*Great medical encyclopedia*]. V. 22. 3rd ed. Moscow: Sovetskaya entsiklopediya, 1984. 470 p. (in Russian)
- Ivanov N.G., Georgievskiy A.S., Lobastov O.S. Sovetskoe zdravookhranenie i voennaya meditsina v Velikoy Otechestvennoy voyne 1941–1945 gg. [Soviet health and military medicine in the Great Patriotic War of 1941–1945]. Leningrad: Meditsina, 1985. 304 p. (in Russian)
- Rusk H.A. Rehabilitation medicine. Saint Louis: Mosby, 1977
- 4. Hulek A. Teoria i praktyka rehabilitacji inwalidow [Rehabilitation of the disabled in theory and in practice]. Warszawa, 1969. (in Polish)
- General Survey on the reports on the Vocational Rehabilitation and Employment (Disabled Persons) Convention (№ 159) and Recommendation (№ 168). Geneva, 1983.
- Chino N. et al. Current status of rehabilitation medicine in Asia: a report from new millennium Asian symposium on rehabilitation medicine. Journal of Rehabilitation Medicine: official journal of the UEMS European Board of Physical and Rehabilitation Medicine. 2002; 34: 1–4. DOI:10.1080/165019702317242631. PMID:11900256.
- 7. Durkin M. *The epidemiology of developmental disabilities in low-income countries*. Mental Retardation and Developmental Disabilities Research Reviews. 2002; 8: 206–211. DOI:10.1002/mrdd.10039. PMID:12216065.
- 8. Chazov E.I. Obshchie printsipy reabilitatsii bol'nykh infarktom miokarda [General principles of rehabilitation of patients with myocardial infarction]. Reabilitatsiya i opredelenie trudosposobnosti bol'nykh khronicheskoy koronarnoy nedostatochnost'yu [Rehabilitation and working capacity determination of chronic coronary artery disaese patients]. Moscow: TsIETIN, 1970. P. 5–12. (in Russian)
- 9. Anokhin P.K. Obshchie printsipy kompensatsii narushennykh funktsiy i ikh fiziologicheskoe obosnovanie [General principles of compensation for impaired functions and their physiological justification]. Moscow: Meditsina, 1977. (in Russian)

- 10. Shkhvatsabaya I.K., Aronov D.M., Zaytsev V.P. Reabilitatsiya bol'nykh ishemicheskoy bolezn'yu serdtsa [Rehabilitation of patients with ischemic heart disease]. Moscow, 1978. (in Russian)
- 11. Stolyarova L.G., Tkacheva G.R. Reabilitatsiya bol'nykh s postinsul'tnymi dvigatel'nymi rasstroystvami [Rehabilitation of patients with postinsultaneous motor disorders]. Moscow, 1978. (in Russian)
- 12. Yumashev G.S., Renker K. *Osnovy reabilitatsii* [*Fundamentals of Rehabilitation*]. Moscow: Meditsina, 1973. 111 p. (in Russian)
- 13. Ivanova G.E. *Meditsinskaya reabilitatsiya v Rossii.*Perspektivy razvitiya [Medical rehabilitation in Russia.

  Development prospects]. Consillium Medicum. 2016; 18

  (2.1): 9–13. (in Russian)
- 14. Gutenbrunner S., Ward A.B., Chamberlain M.A. *White book on physical and rehabilitation medicine in Europe*. Europa medicophysica. 2006; 42 (4): 332.
- 15. Puzin S.N., Shurgaya M.A., Shkurko M.A., Krasnomyasova I.A., Khristoforov S.N., Memetov S.S. Aspekty reabilitatsii invalidov pozhilogo vozrasta v Rossiyskoy Federatsii [Aspects of rehabilitation of disabled elderly persons in the Russian Federation]. Medikosotsial'naya ekspertiza i reabilitatsiya. 2016; 3: 116–122. (in Russian)
- 16. Mashkovskiy E.V., Predatko K.A., Magomedova A.U. Para-GTO adaptatsiya ispytaniy vserossiyskogo fizkul'turno-sportivnogo kompleksa «Gotov k trudu i oborone» dlya lits s funktsional'nymi, anatomicheskimi osobennostyami i invalidnost'yu [Para-GTO adaptation of the civil defense training system "ready for labor and defense" («Gotov k Trudu i Oborone» GTO, in Russian) for the individuals with physical challenges and disabilities]. Sportivnaya meditsina: nauka i praktika [Sports Medicine: Research and Practice]. 2016; 6 (1 (22)): 112–121. DOI: 10.17238/ISSN2223-2524.2016.1.112. (in Russian)
- 17. Pastukhova I.V., Safonov L.V. Ispol'zovanie individual'nykh trenirovochnykh pul'sovykh zon dlya preduprezhdeniya razvitiya peretrenirovannosti u sledzh-khokkeistov [The use of individual training pulse

- zones to prevent overtraining in sledge-hockey players]. Sportivnaya meditsina: nauka i praktika [Sports medicine: research and practice]. 2015; 4: 96–102. DOI: 10.17238/ISSN2223-2524.2015.4.96. (in Russian)
- 18. Dobrovolskiy O.B., Narkevich E.M., Puzin S.N., Bogova O.T., Suvorov V.G., Pastukhova I.V., Safonicheva M.A. Psikhologicheskie aspekty mul'tiprofessional'nogo soprovozhdeniya sportsmenov-invalidov [Psychological aspects of the multi-professional support
- of disabled athletes]. Sportivnaya meditsina: nauka i praktika [Sports medicine: research and practice]. 2013; 2: 65–71. (in Russian)
- 19. Dobrovolskiy O.B., Achkasov E.E., Mashkovskiy E.V., Sederkholm L.A. *Otchet o Pervom chempionate Rossii po regbi na kolyaskakh* [*Report on the First rugby in wheelchairs league in Russia*]. Sportivnaya meditsina: nauka i praktika [Sports medicine: research and practice]. 2013; 2: 79–82. (in Russian)

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