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Iurii L. Kuchyn, Lesya V. Lymar, Tetiana V. Kolomiiets INDIVIDUAL FACTORS OF MEDICAL PHD STUDENTS' ENGLISH COMMUNICATIVE COMPETENCE	786
Eugenia I. Vezhnovets, Yuri B. Yashchenko EFFECTIVENESS OF USING THE BED FUND AND HUMAN RESOURCES FOR PROVIDING MEDICAL CARE TO CHILDREN WITH RESPIRATORY DISEASES	792
Nataliia M. Kalashnykova CHARACTERISTICS OF THE VOLUME AND OUTCOMES OF MEDICAL CARE FOR PATIENTS WITH SKIN CANCER IN UKRAINE IN 2010-2020	799
Olena S. Skrypnikova, Tetiana P. Yurochko ORGANIZATION OF OPHTHALMOLOGICAL CARE IN UKRAINE	805
Tatiana A. Vezhnovets, Vira Yu. Vozniuk, Vitalyi G. Gurianov, Oleksandr V. Korotkyi EFFECT OF URBANIZATION ON DENSITY OF THE GENERAL PRACTITIONERS, AVERAGE LIFE EXPECTANCY AND MORTALITY FROM THE DISEASES OF CIRCULATORY SYSTEM	811
Tatyana O. Yastrub USING OF CALCULATION MODELS OF THE PENETRATION OF SUBSTANCES THROUGH THE SKIN IN THE ASSESSMENT OF THE RISK OF DERMAL INFLUENCE OF PESTICIDES ON WORKERS	817
Halyna L. Voskoboinikova, Liudmyla V. Konovalova, Victoria V. Dovzhuk, Natela S. Dovzhuk RATIONAL PHARMACOTHERAPY ON THE BASIS OF PHARMACOECONOMIC JUSTIFICATION AND MARKETING RESEARCH ON THE APPLICATION OF IMMUNOMODULATORY PHYTOPREPARATIONS	824
Olha S. Bilous, Olena P. Vavrinevych, Sergiy T. Omelchuk, Vasyl D. Aleksiihuk, Alina I. Syrota PROFESSIONAL RISKS FOR AGRICULTURAL PERSONNEL TREATING BERRIES AND MELON CROPS WITH PESTICIDES	831
<b>REVIEW ARTICLES</b>	
Dmytro D. Diachuk, Anna S. Zdelova, Mykhailo D. Diachuk EXPERIENCE OF INTEGRATED MANAGEMENT OF PATIENTS WITH DIABETIC RETINOPATHY (EXAMPLE OF ANALYSIS OF PERFORMANCE INDICATORS OF A MULTI PROFESSIONAL HEALTHCARE FACILITY)	838
Victor A. Ohniev, Tetyana V. Peresyphkina, Nataliya M. Martynenko, Anna A. Podpriadova SOME ASPECTS OF MEDICAL REHABILITATION IN UKRAINE AND PROSPECTS FOR CHANGES IN REHABILITATION SERVICES IN THE WORLD	843



## REVIEW ARTICLE

# SOME ASPECTS OF MEDICAL REHABILITATION IN UKRAINE AND PROSPECTS FOR CHANGES IN REHABILITATION SERVICES IN THE WORLD

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## ABSTRACT

**The aim:** To assess the situation, relevance and opportunities for providing medical rehabilitation services in Ukraine and to determine the current trends in the development of medical rehabilitation in the world.

**Materials and methods:** An analysis was made of WHO data on the prospects for the development of rehabilitation services, as well as the legal framework of Ukraine and data from the National Health Service on medical rehabilitation.

**Conclusions:** Demand for rehabilitation services is growing. Ukraine is following the path of active adaptation and implementation of world documents from medical rehabilitation to practical health care, taking into account the dynamics of population aging, the prevalence of non-communicable diseases, and as a component of the strategy of improving the quality and availability of medical care, adequacy to the realities of the times.

**KEY WORDS:** medical rehabilitation, package of medical services

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## INTRODUCTION

Universal coverage of medical care should become the main strategy for the development of any health care system in the world, and this strategy is clearly reflected in the Sustainable Development Goals. [1]. Universal coverage of medical care also provides for the possibility of receiving high-quality rehabilitation care without additional financial burden anywhere and anytime without any restrictions.

The importance of rehabilitation measures is emphasized in the Alma-Ata Declaration of the WHO [2], where it is defined as an important component of primary health care.

However, according to the WHO, among many health care systems today, rehabilitation is not fully and effectively integrated into primary health care [3].

The needs for the development of rehabilitation services tend to grow. It is determined that the main reason for this situation is the aging of the population in all countries; prevalence of non-communicable diseases; disability; an increase in the level of injuries; migration and resettlement of people; emergency situations (including outbreaks of infectious diseases, humanitarian crises, natural disasters, etc.) [4].

## THE AIM

To assess the situation, relevance and opportunities for providing medical rehabilitation services in Ukraine and to determine the current trends in the development of medical rehabilitation in the world.

## MATERIALS AND METHODS

An analysis was carried out of: the regulatory and legal framework of Ukraine on issues of ensuring medical rehabilitation measures; data dashboards of reports of the National Health Service of Ukraine on the results of providing medical care in accordance with the Program of Medical Guarantees; WHO data on the prospects for the development of rehabilitation services.

## REVIEW AND DISCUSSION

According to the WHO, the countries of the European region have the oldest population among six regions of the world [5]. Thus, among the twenty-five countries with an elderly population, twenty-two countries belong to the European region, and the number of the population over the age of 60 has an upward trend: from 23.9% in 2015 to

34.2% in 2050 [6]. The increase in the age of the population is combined with multimorbidity, a combination of diseases and an increase in functional disorders, as a consequence of diseases, which leads to limitation of movement or self-care, communication or mental disorders [7], limitation of participation in community life, labor and social activity, can cause isolation or impoverishment. The WHO also includes the incidence of COVID-19 as an emergency situation today, which, as a consequence, also requires multidisciplinary rehabilitation interventions [8, 9].

Currently, about 2.4 billion people worldwide suffer from pathological conditions for which rehabilitation is indicated. Due to changes in health and population demographics, the need for rehabilitation around the world is projected to continue to grow [8,9].

According to WHO, in many regions of the world, these growing needs for rehabilitation are largely unmet. In some low- and middle-income countries, more than half of people who needed for rehabilitation services do not receive them.

The World Health Organization identifies a number of factors that contribute to unmet rehabilitation needs. It:

- low priority level of rehabilitation, insufficient funding, lack of policy or plans in the field of providing rehabilitation services at the national level;
  - lack of access to rehabilitation services outside urban areas and long waiting times;
  - a high level of public spending on rehabilitation services and the absence or insufficiency of financial support mechanisms;
  - shortage of qualified specialists in the field of rehabilitation;
  - shortage of resources, including auxiliary technologies, equipment and consumables;
  - low level of scientific work and data collection on rehabilitation;
  - ineffective or insufficiently used mechanisms for directing patients to receive rehabilitation services [10].
- Strengthening the medical rehabilitation system is relevant for Ukraine as well. Medical rehabilitation, as a type of medical care, is defined by the Law of Ukraine "On Health Care", which defines and substantiates to whom, in what cases and how this type of medical care should be provided [11].

It is also determined that Medical Rehabilitation is prescribed for patients: after the end of the acute period of the disease in the presence of life restrictions; with congenital and hereditary pathological conditions, acquired disorders of the locomotor and speech apparatus, visual and hearing impairments; in case of permanent incapacity (disability).

In accordance with the Law, medical rehabilitation is carried out free of charge by state and communal health

care institutions, with which contracts for public health care have been concluded, upon referral according to the medical indications of a state or communal health care institution in which the patient was provided with secondary (specialized) or tertiary care (highly specialized) medical care.

Given the relevance of the development of the rehabilitation system in Ukraine, the Law of Ukraine "On Rehabilitation in the Health Care Sector" (2021) came into force. [12]. This document defines the state policy on rehabilitation in the field of health care, the rights and obligations of persons who receive rehabilitation, the principles of providing rehabilitation services, rehabilitation subjects, providers and recipients of rehabilitation services.

According to the classification of the World Bank (2022), Ukraine belongs to countries with income below the average. The data used by the WHO show that among the population of Ukraine (44042432), almost half (47.33%) of people have at least one disease for which it would be possible to use rehabilitation services. In some other countries of the European region, this percentage of people is: in Great Britain 43.16%; Sweden - 41, 48%; Switzerland 44.98%; Poland 48.23%; Germany 45.32%; Belarus 45.25%; Latvia 46.88%; Lithuania 47.09%; Turkey 31.79%; Uzbekistan 26.62%; Italy 44.96% [5].

According to WHO (2019), the sex-age structure of the population, which provides for the introduction of rehabilitation measures in Ukraine, is presented in table 1.

Conditions requiring rehabilitation services include: diseases of the musculoskeletal system (65.5%), sensory disorders/sense organs (8.6%); neurological disorders (9.0%); mental disorders (3.3%); chronic diseases of the respiratory tract (1.9%); neoplasms (0.6%); cardiovascular diseases (1.1%).

Issues related to medical rehabilitation are reflected in the service packages of the medical guarantee program of the National Health Service of Ukraine (NHSU). The service packages were formed on the basis of the work of experts in the development of draft specifications and conditions for the provision of medical care, which will be provided under the Program of Medical Guarantees in the relevant areas of medical care.

The mission of NHSU is universal medical coverage, when the patient can receive affordable and high-quality medical care without significant financial costs. NHSU procures safe and high-quality medical services necessary for patients, taking into account the possibilities of the state budget.

So, today it is envisaged to provide / carry out medical rehabilitation activities for patients in the subacute and recovery period in the conditions of providing medical

**Table I.** Distribution of the population of Ukraine, which provides for the introduction of rehabilitation measures, by sex and age structure (2019)

age categories	0-14 years		15-64 years		Older than 65 years	
	female	male	female	male	female	male
absolute indicators / %	299166 (47,44%)	331374 (52,55%)	6793912 (47,91%)	7384164 (52,08%)	3907313 (64,73%)	2128900 (35,27%)
in general / %	630540 (3,07%)		14178076 (68,02%)		6036213 (28,96%)	
all in Ukraine			20844829			

services begins from outpatient basis at the patient's place of residence / stay if there are medical indications.

The grounds for providing rehabilitation services are the referral of a doctor (treating physician, GP/family doctor) or self-referral to a doctor with whom a patient with a chronic disease is under medical supervision.

Today, the specifications and conditions for the purchase of medical services under the Program of Medical Guarantees provide for the following medical rehabilitation packages in the following areas [13]:

- medical rehabilitation of babies who were born prematurely and/or sick during the first three years (package of services No. 25);

- medical rehabilitation of adults and children from three years of age with lesions of the musculoskeletal system (package of services No. 26);

- medical rehabilitation of adults and children from three years of age with damage to the nervous system (package of services No. 27).

These packages of services provide for an examination, establishing a diagnosis and the need for measures, conducting laboratory studies, conducting instrumental studies, providing services by a multidisciplinary team, providing counseling for the child by doctors of various specialties according to nosology and condition, drawing up an individual work program, providing recommendations (to the patient/family /parents), psychological support, referral to institutions of specialized/highly specialized medical care, assessment of the condition regarding the possibilities of transition to another stage of rehabilitation.

The requirements for the provision of these types of services are the presence of a license to conduct economic activity in medical practice in the specialty of physical and rehabilitation medicine, orthopedics/traumatology, psychology, psychiatry.

According to the analytical data of the NHSU for 2022, it was established that the total amount of payments for rehabilitation service packages is UAH 3,626,701,520. At the same time, package No. 26 "Medical rehabilitation of adults and children from 3 years of age with damage to the musculoskeletal system" was the most popular and possible to implement, which is confirmed by a significant percentage of payments for this particular

package among the packages of rehabilitation services, which is 58.89%, against 32.14% of payments under package No. 27 "Medical rehabilitation of adults and children from 3 years old with damage to the nervous system" and package No. 25 "Medical rehabilitation of babies who were born prematurely and/or sick during the first 3- x years of life" (8.97%).

Kyiv, Dnipropetrovsk and Lviv regions are among the regions with a high level of implementation of this rehabilitation package (No. 26). These same regions, according to the dashboards of the National Health Service, have the largest number of contracts for medical care and the largest total number of groups of services implemented.

Prospects for the development of rehabilitation services in the world.

Rehabilitation interventions are cost-effective and have the best health outcomes. Rehabilitation interventions avoid costly hospitalizations, reduce hospital stays, reduce readmissions, and reduce the risk of complications from health problems.

The importance of updating rehabilitation services for health care systems is emphasized by numerous publications of the World Health Organization, which identify ways to solve existing problems.

So, rehabilitation is an important health care service, along with prevention, treatment and palliative care. However, in many countries, people do not have access to the rehabilitation services they need. And the best way to ensure that rehabilitation services reach all those who need them is to integrate rehabilitation at all levels of the health care system as part of overall health care coverage. In particular, it is important that rehabilitation is integrated at the primary care level, bringing services closer to the community, thereby reducing costs and improving the equity and timeliness of service delivery.

It is emphasized that rehabilitation cannot be expanded on its own, rather the health system as a whole needs to be strengthened to better deliver rehabilitation. This includes strengthening the various components that make up the health system, namely: leadership and management; financing; delivery service; workforce; auxiliary technologies; and information.

In many countries, there is limited integration of rehabilitation into health financing schemes, and this has resulted in relatively small budget allocations and a further gap between what is funded and available compared to what the population needs [9]. When public investment in rehabilitation is low, service users are forced to pay more out-of-pocket and, unfortunately, rehabilitation is often out of reach for many people who need it. In addition, in many countries there is a dependence on funding from external development partners, which leads to problems with the long-term delivery and sustainability of rehabilitation services.

The Rehabilitation 2030 initiative proposed by WHO specifically draws attention to the deep unmet need for rehabilitation worldwide and emphasizes the importance of strengthening health systems to enable rehabilitation [9]. The initiative marks a new strategic approach for the global rehabilitation community, emphasizing that:

- Rehabilitation should be available to the entire population at all stages of life.
- Efforts to strengthen rehabilitation should be aimed at supporting the health care system as a whole and integrating rehabilitation at all levels of health care.
- Rehabilitation is an important health service and crucial to achieving universal health care coverage.

The Rehabilitation 2030 initiative was launched in February 2017 and presented a “call to action” encouraging stakeholders to take concerted and coordinated global action to scale up rehabilitation efforts [9].

For this purpose, 10 priority areas of activity were determined, which can be adapted and implemented to the health care systems of different countries:

1. Building strong leadership and political support for rehabilitation efforts at sub-national, national and global levels.
2. Strengthening rehabilitation planning and implementation at the national and subnational levels, including in the framework of emergency preparedness and response.
3. Improving the integration of rehabilitation into the health care sector and strengthening intersectoral relations to effectively meet the needs of the population.
4. Inclusion of rehabilitation in the general coverage of medical care.
5. Creation of complex models of providing rehabilitation services to gradually achieve fair access to quality services, including auxiliary items, for the entire population, including residents of rural and remote areas.
6. Developing a strong multidisciplinary rehabilitation workforce appropriate to the country context and

promoting rehabilitation concepts throughout health workforce education.

7. Expansion of rehabilitation funding through appropriate mechanisms.
8. Collection of rehabilitation-related information to improve health information systems, including system-level rehabilitation data and information on functioning using the International Classification of Functioning, Disability and Health (ICF).
9. Building research capacity and expanding the availability of reliable evidence for rehabilitation.
10. Creation and strengthening of networks and partnerships in rehabilitation, especially between low-, middle- and high-income countries.

Also, the World Health Organization (WHO) has prepared the document “Rehabilitation in the health care system: a guide for action” to assist governments in strengthening health care systems to provide the population with the necessary rehabilitation services. This guide recommends that governments undertake the task of strengthening rehabilitation services in the following four stages: (1) assessment of the rehabilitation situation; (2) strategic planning; (3) development of the concept of monitoring, evaluation and review; (4) implementation of the strategic plan (6).

Rehabilitation is one of the most important health care strategies aimed at ensuring people’s participation in education, work and social life; however, rehabilitation needs often remain unmet due to a shortage of skilled rehabilitation workers [14].

The resource that should solve the problem of qualification of rehabilitation specialists is the proposed system of rehabilitation competencies of the WHO [14]. It is consistent with WHO strategic approach to workforce competencies, detailed in the WHO Global Competency Framework (2020), and should provide a basis for the development of context-specific competency frameworks and standards that are needed to improve education and training, regulation and quality improvement health care services. This system, proposed in the WHO document, can also be used in the development of educational programs, in the establishment of practice standards, and in the creation of tools for evaluating the effectiveness of rehabilitation services. The proposed competencies are considered as part of the implementation of the WHO Initiative “Rehabilitation 2030”.

The deepening of medical rehabilitation programs and the expansion of services is relevant both for the European community and for Ukraine in view of global trends, such as the aging of the population and the spread of non-infectious diseases, as well as



specific problems of the country, such as significant population migration and numerous consequences of military actions.

In 2023, the Medical Guarantee Program provides for 39 service packages. Medical rehabilitation is expected to be one of the priorities in 2023. In this way, the country will have an incentive to create powerful rehabilitation facilities, where the patient will be able to receive comprehensive rehabilitation services.

Special attention is paid today to psychological help. In particular, a package of psychological support services is being introduced at the primary level, which is proposed for implementation since 2022.

The WHO strategies for the development of medical rehabilitation, the stages of strengthening rehabilitation services, and the requirements for the competencies of rehabilitation specialists are important for Ukrainian society in the context of reforming the health care system and are on the way to ratification and adaptation to modern requirements.

Further analysis of the development of the medical rehabilitation system, inclusion of this type of assistance in the package of medical guarantees in Ukraine, as well as scientific justification of the optimal volume of

rehabilitation services with the involvement of scientific institutions is necessary.

## CONCLUSIONS

Global analytics determine that the demand for rehabilitation services is growing. The reasons are: the aging of the population, the spread of non-infectious diseases, injuries, natural disasters, etc.

The problems of improving the medical rehabilitation system are relevant in the world, which is confirmed by a number of analytical and recommendatory documents of the WHO. The documents determine the strategy for the development of rehabilitation services and the competencies of medical workers who provide rehabilitation services, and determine effective intervention algorithms.

Ukraine is following the path of active adaptation and implementation of world documents of medical rehabilitation to practical health care, taking into account the dynamics of population aging, the prevalence of non-communicable diseases, and as a component of the strategy of improving the quality and availability of medical care, adequacy to the realities of the times.

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**Conflict of interest:**

*The Authors declare no conflict of interest.*

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