

72.27%, outdoor walks - 64.09% and delicious food - 60.91%, students in the comparative group also preferred sleep - 74, 15%, walks - 62,77%, delicious food - 54,31% ( $p \geq 0,05$ ). Significantly, a significant difference was found in the use of cigarettes by female students of the main and comparative groups -26.38% and 10.77%, respectively ( $p < 0.05$ ).

When re-examining the study break, 47.73% of Group I students and 33.85% of Group II students ( $p < 0.05$ ) were used as a stress reliever. Walking in the air helped cope with 72.27% of girls with NPMD and 60.46% of healthy girls ( $p < 0.05$ ), physical activity - 50.45% and 32.62% of female students, respectively ( $p < 0.05$ ).

**Conclusions.** As a result of the study of the manifestations of stress associated with learning, it was found that significantly more students of the main group (with NPMD) noted as manifestations of the impact of stress: feeling helpless, inability to cope with problems, increased distraction, poor concentration, annoyance, insult fear, anxiety, bad mood, depression, loss of confidence, decreased self-esteem, poor sleep, impaired social contacts, communication problems ( $p < 0.05$ ). As a stress reliever, students from both groups used the most frequently: sleep, walks in the open air, delicious food, communication with friends ( $p \geq 0.05$ ).

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## NATIONAL MEDICAL SERVICES MARKET PARTICIPANTS IN UKRAINE

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## НАЦИОНАЛЬНЫЕ УЧАСТНИКИ РЫНКА МЕДИЦИНСКИХ УСЛУГ В УКРАИНЕ

**Summary.** The article focuses on functional activities of the national medical services market participants in Ukraine, which is an element in the mechanism of public administration of healthcare sector. Four principal levels of participants are singled out: entities that execute public regulation and outline strategies for the sector's development; entities that perform administration, supervision, and control; entities that are service contractors or providers; entities that are service recipients (patients). Development of the medical services market in Ukraine resulted in emergence of medical entities that are service producers and simultaneously, of autonomous municipal non-profit enterprises. Entities ensuring financial support to medical services provision in reformation conditions are medical institutions, National Health Service of Ukraine, insurance companies, and charitable foundations. The article determines local-level control and administration entities: entities controlling a medical institution's operations (supervisory and monitoring boards which will include representatives of the medical institution, local self-governance bodies); charitable foundations and organizations, insurance companies, international companies and organizations working in the field of medical services and modernization of medicine administration systems. It is ascertained that in Ukraine, an electronic healthcare system is being formed, which leads to formation of market interconnection mechanisms and relations of the following principal participants in the medical sector: private medical institutions; telemedicine entities; insurance agents and companies; pharmacies; diagnostic laboratories; private hospitals; academic medical centers, etc.

**Аннотация.** Статья посвящена функциональной деятельности участников национального рынка медицинских услуг в Украине, которая является элементом механизма государственного управления сектором

здоровоохранения. Выделены четыре основных уровня участников: организации, осуществляющие государственное регулирование и намечающие стратегии развития сектора; субъекты, которые осуществляют администрирование, надзор и контроль; юридические лица, которые являются подрядчиками или поставщиками услуг; лица, являющиеся получателями услуг (пациенты). Развитие рынка медицинских услуг в Украине привело к появлению медицинских организаций, которые являются производителями услуг и одновременно автономными муниципальными некоммерческими предприятиями. Субъектами, обеспечивающими финансовую поддержку оказания медицинских услуг в условиях реформирования, являются медицинские учреждения, Национальная служба здравоохранения Украины, страховые компании и благотворительные фонды. В статье определяются органы контроля и управления на местном уровне: субъекты, контролирующие деятельность медицинского учреждения (наблюдательные и наблюдательные советы, в состав которых войдут представители медицинского учреждения, органов местного самоуправления); благотворительные фонды и организации, страховые компании, международные компании и организации, работающие в сфере медицинских услуг и модернизации систем управления медициной. Установлено, что в Украине формируется электронная система здравоохранения, что приводит к формированию рыночных механизмов взаимосвязи и взаимоотношений следующих основных участников медицинского сектора: частных медицинских учреждений; телемедицинские организации; страховые агенты и компании; аптеки; диагностические лаборатории; частные больницы; академические медицинские центры и др.

**Keywords:** medical services, affordability of medical services, public regulation entities, entities - medical service recipients, medical service contractors.

**Ключевые слова:** медицинские услуги, доступность медицинских услуг, субъекты государственного регулирования, субъекты - получатели медицинских услуг, подрядчики медицинских услуг.

**Setting the problem in general and its connection with important practical tasks.** Due to reforms in the healthcare sector, changed model of functioning and financing of medical institutions and entities providing medical services, there emerge new groups of the national medical services market participants, the existing forms of relations are developing and new ones are being introduced. In fact, a market of medical services is being formed, which is characterized by signs of competitiveness, and this causes changes in approaches to all the market participants functioning. The above requires that a more detailed research is done into modern-day features of the participants operations on the medical services market.

**Analysis of the latest research and publications.** S.B. Bulets [2], M. Vasiuk [3], Yu.V. Vashchenko [4], S.H. Kryvush [11], M.I. Pasko [16], I.L. Sazonets, I.Ya. Zyma [20], O. M. Tsiborovskyi [21], O.V. Chekhun [22], Z.V. Yurynets, O.A. Petrukh [23] dedicated their research papers to the problem of estimating the operations of the national medical services market participants in Ukraine. However, it is worth noting insufficiency of the studies as the researchers basically formed a classification of the market participants and defined authorities of the main public market regulators at the national level. Therefore, it is reasonable to conduct a detailed analysis of the participants' activities on the national medical services market in Ukraine.

**The article's objective** is to study operations of the national medical services market participants in Ukraine in conditions of reforming the healthcare system.

**Presentation of the basic material.** Mechanism of public regulation in the healthcare sector consists of the following basic elements: participant, object, purpose, goals, and principles, as well as instruments of the mechanism implementation. The state, local authorities, legislative, executive and judicial bodies, non-governmental and political organizations are also considered public regulation actors in the healthcare sector [10, p. 47].

All healthcare institutions should be regarded medical sector objects regulated by the state. The principal body ensuring formation and fulfillment of the healthcare public policy is the Ministry of Healthcare of Ukraine. The Ukrainian Government and Ministry of Healthcare develop instruments for the medical sector to function effectively, carry out planning and forecasting, establish state standards, develop governmental order programs aimed at procuring the sector with necessary resources, and monitor activities in the sector [11, p. 277].

Medical service contractors are companies, institutions, and organizations irrespective of their ownership and incorporation form, and also sole traders pursuing medical practice or performing medical activities under a license obtained [2, p. 114].

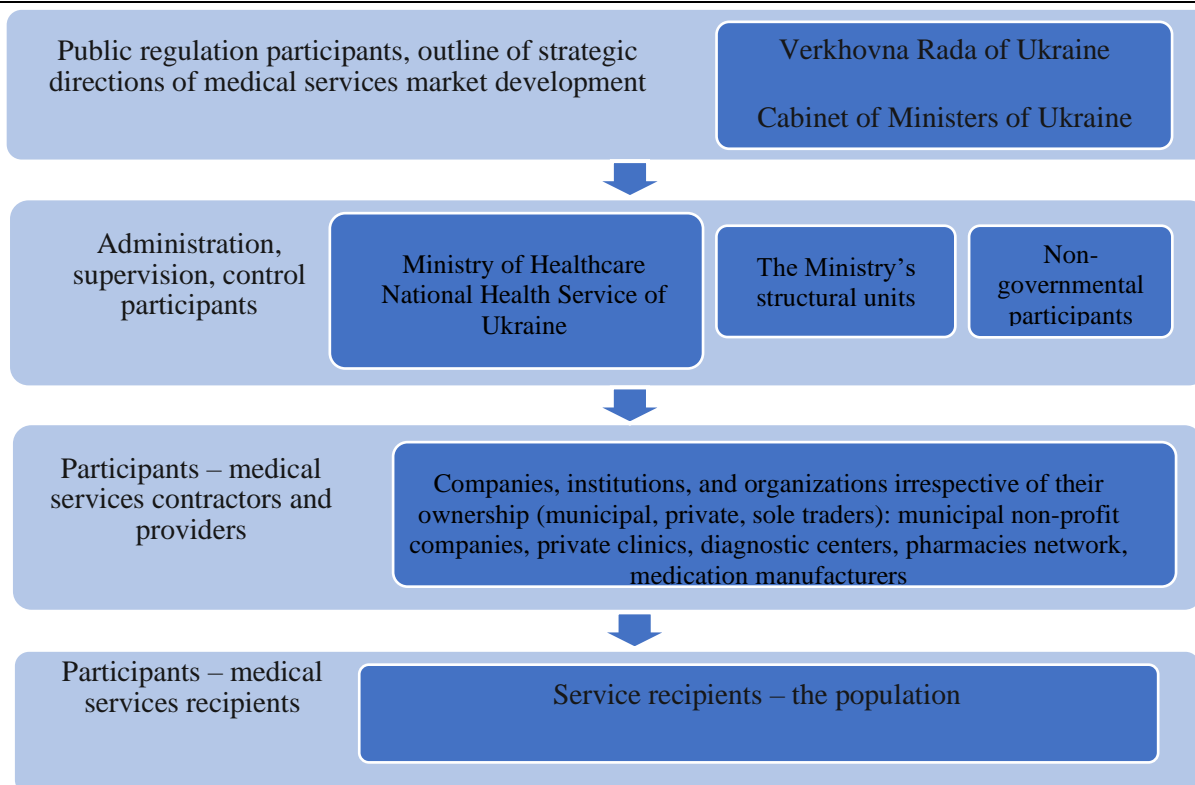


Fig. 1. National medical services market participants in Ukraine\*

\*Source: compiled by the author

The healthcare system reform strategy makes it possible to determine the public administration actors in this field, which are responsible for various stages of their formation and implementation, namely: the Verkhovna Rada of Ukraine, Cabinet of Ministers of Ukraine, Ministry of Healthcare of Ukraine, and other authorities, institutions, companies, non-governmental organizations, and law-enforcement agencies [21, p. 67].

On the medical services market, there are three participants of crucial importance for the healthcare system, which take part in the process of communicative interaction with the medical service consumers and set out specialties of such interaction. They are:

- patient (participant consuming medical services);
  - medical institution (participant providing medical services);
  - payer (participant financing medical services)
- [22].

As the market relationship elements evolved, there emerged a category of medical entity – producer of medical services. Medical entity producing medical services is a registered and duly licensed treatment and prevention institution of any form of incorporation and ownership, which provides medical services [1, p. 418]. Production and consumption of medical aid (service) occurs simultaneously. There is a provider of medical aid (or service) and its consumer – patient (client), and economic operators: owner (producer and provider) of medical service (seller) and its buyer (client). Funding can be provided at the expense of: reimbursements

from insurance companies; payments from employers and employees; budgetary tax reallocation toward medicine; investment measures to improve public health; charitable foundations and donations; payments from the enterprise, firm, company (where employees are working); at the cost of a natural person, etc. [15].

The healthcare system reform in Ukraine envisages that function of the medical service client will be vested upon an organization that should allocate financial resources to be replenished by patients through the insurance medicine or taxation. Medical institutions are defined as service providers and patients – as medical service consumers. In compliance with the reform, they provide for forming an autonomous client of services, autonomous providers that will sell medical services to the client under concluded contracts. Prospectively, a controlling body or supervisory board will be established. Thus, all actions of the state should be aimed at creating a single market of medical services (medical space) which will unite all providers (healthcare institutions and establishments), including private medical centers, pharmacies, etc. [23, p. 118].

Network of healthcare institutions is a complex of healthcare institutions that satisfy public needs of medical service in a corresponding territory [14]. Healthcare institutions are contractors, providers of medical services to the population.

Within a healthcare institution, entities can be classified as follows:

- 1) administration of the medical institution;
- 2) employees of the medical institution (doctors);
- 3) persons organizing procurement of the medical institution with various resources;

4) patients.

In Ukraine, medical services payer is the National Health Service of Ukraine (NHSU), a central executive power agency pursuing governmental policy in the field of public financial guarantees of medical services for the people. NHSU operations are instructed and coordinated by the Cabinet of Ministers of Ukraine through the Minister of Healthcare [18]. Thus, NHSU operations can be regarded effective, because as at April 1, 2019, 1238 medical institutions entered into contracts with the NHSU (including 117 private clinics and 110 sole traders), 97% of municipal institutions adopted a new model of medical services financing, and 92% of institutions have computerized work stations. In 2018 and early 2019, NHSU effected payments amounting to over UAH 7 billion. What is more, one can see a steady growth in payments under contracts with municipal non-commercial companies [12].

Effective operations of the entities is also proved by the electronic healthcare system being introduced jointly by the Ministry of Healthcare (regulation) and NHSU (contracting the service providers, analyzing the data and public needs, developing a medical guarantees program, paying for medical services).

Thus, formation of the electronic healthcare system will ensure transparent funding, a gradual transition to electronic records, formation of a new business environment with quality services, create preconditions for implementing innovations such as telemedicine, and facilitate development of the medical IT-market. Due to development of the electronic healthcare system, key roles are played by the following entities:

1) Ministry of Healthcare of Ukraine ensures formation and realization of policy in the field of healthcare and is responsible for reforms implementation;

2) National Health Service of Ukraine analyzes and applies the data to forecast public needs of medical services, develop the medical guarantees program, and make payments to the institutions for medical services;

3) Elektronne Zdorovya [*electronic health*] State Enterprise (eZdorovya) administers eHealth central database and monitors development of the electronic healthcare system in Ukraine;

4) business entities introduce electronic medical information systems (MIS) which enable automated work of medical institutions from the centralized database.

Formation of the electronic healthcare system results in establishment of market interconnection mechanisms and relationships of the following principal actors in the medical sector:

- private medical institutions;
- telemedicine entities;
- insurance agents and companies;
- pharmacies;
- diagnostic laboratories;
- private hospitals;
- academic medical centers.

All the mentioned entities will have access to the central database of medical information systems, which will considerably simplify access to medical services for patients. Currently, 1,854 medical institutions, 28.41 million patients, 25,244 doctors, 1,230 pharmacies, and 12,014 pharmacists have joined the electronic healthcare system. The above ensures formation of a unified medical eco-space in Ukraine [15, p. 119].

An important role in the healthcare system is played by economic operators that produce goods and products of medical purpose, innovative medical technologies, etc. These are pharmaceutical companies, technology parks, innovation clusters, small high-tech enterprises, private scientific medical companies, medical and technical centers and institutes, and other innovative infrastructure entities [23, p. 119].

Table 1 displays authorities of principal participants of the national medical services market in Ukraine as in 2019.

Table 1

**Functions and authorities of principal participants of the national medical services market in Ukraine as in 2019\*.**

<b>Market participant</b>	<b>Functions, authorities</b>
Verkhovna Rada of Ukraine	Forms the basis of the healthcare governmental policy [14].
Cabinet of Ministers of Ukraine	Instructs and coordinates the MHC work; organizes development and fulfillment of governmental target programs; creates economic, legal, and organizational mechanisms stimulating effective activities in the healthcare sector; ensures development of the healthcare institutions network; concludes intergovernmental agreements and coordinates international cooperation on healthcare issues; within its scope of competence, exercises other authorities conferred on the executive agencies in the field of healthcare [14].
Ministry of Healthcare of Ukraine (MHC)	Administration and coordination of the healthcare institutions network, regulatory supervision of all types of market operations, provision of information, ensuring transparency and accountability [13; 14; 18].
Commission on State Registration of Pharmaceuticals	Assessment of compliance with the applicable Ukrainian legislation during the procedure of pharmaceuticals state registration [20].
<b>MHC structural units</b>	

State Expert Center of MHC of Ukraine, State Enterprise	Specialized expert organization for preclinical studies, clinical trials, and state registration of pharmaceuticals; pharmaceutical supervision; standardization of medical aid and medical service including pharmaceutical service [5].
Ukrainian Medical Center for Certification, State Enterprise	Services for assessing conformance of medical products and certification of quality management systems [6].
State Service of Ukraine for Pharmaceuticals and Narcotic Drugs Control	Issuing licenses to economic operators to pursue their economic activities; issuing permits to economic operators to import / export and transit through the Ukrainian territory narcotic drugs, psychotropic substances, and precursors [17].
Ukrainian Scientific Pharmaceutical Center for Medications Quality, State Enterprise	Subordinated to the State Service of Ukraine for Pharmaceuticals, it functions as a lead institution in the field of standardization and quality control of pharmaceuticals [7].
Central Laboratory for Analysis of Pharmaceuticals and Medical Products Quality, State Enterprise	Independent control of pharmaceuticals quality and safety in Ukraine, research and experimental developments in the field of other natural and technical sciences [9].
Ukrainian Pharmaceutical Institute of Quality, State Enterprise	Confirming compliance of pharmaceuticals manufacture conditions with the GMP requirements; expert examination to issue expert opinions on the right to import pharmaceuticals to Ukraine; issues of pharmaceutical quality of medical products; expert examination of construction and reconstruction design projects of production facilities, etc. [8].
Non-governmental participants	Assessing the products compliance with requirements of technical regulations; public services for self-declaration of medical products to requirements of technical regulations [3-4].
National Health Service of Ukraine	Central executive agency that pursues state policy in the field of governmental financial guarantees of medical service for the population [12; 19].

\*Source: compiled by the author.

In addition to the mentioned principal participants, it is necessary to single out control and administration entities at a local level:

- entities controlling operations of a medical institution: supervisory and monitoring boards consisting of the medical institution's representatives, local self-governance bodies, local council deputies, and representatives of the community [20];

- charitable foundations and organizations, insurance companies, international companies and organizations working in the sector of providing medical services and improvement of medicine management systems [20, p. 51]. The mentioned entities ensure financing of medical institutions, and in the future, their role on the national medical services market in Ukraine is going to grow.

To summarize the aforesaid, one can draw a conclusion that effectiveness of public regulation in the healthcare and medical services quality sector depends on a proper institutional support. Analysis of the development status of institutes forming the market participants in Ukraine, functions and authorities of each participant on the medical services market are clearly distinguished. Strategic decisions, development programs, and reforms are being actively implemented by the state regulatory agencies (Cabinet of Ministers, Verkhovna Rada, Ministry of Healthcare, National Health Service), and it proves that the participants' activities at the national level are effective. Simultaneously, at the local level, the institutions are being extensively reorganized into municipal noncommercial enterprises vested with autonomous

authorities in financial and economic management. In general, a new group of the medical services market participants is forming and developing, which is being established due to reformation of the healthcare system.

**Conclusions.** Depending on the level of public administration and regulation, different levels of the national medical services market participants can be singled out in Ukraine, which form a single medical space. In the course of research, 4 basic levels of participants are distinguished: entities exercising public regulation and determining development strategies; entities performing administration, supervision, and control; entities that are contractors and providers of services; entities that are service recipients (patients). Development of the Ukrainian medical services market has lead to emergence of such medical entities as service producers and at the same time, autonomous municipal non-profit enterprises. Entities rendering financial support to medical services provision in the reform conditions are medical institutions, National Health Service of Ukraine, insurance companies, and charities. Local-level control and administration entities are defined: entities monitoring operations of a medical institution (supervisory and monitoring boards with representatives of the medical institution, local self-governance bodies); charitable foundations and organizations, insurance companies, international companies and organizations working in the field of medical services and modernization of medicine administration systems. It is ascertained that an electronic system of healthcare is forming in Ukraine, which is responsibility of the Ministry of Healthcare of

Ukraine, National Health Service of Ukraine, Elektronne Zdorovya State Enterprise, and commercial entities. Formation of the electronic healthcare system causes formation of market interconnection mechanisms and relationships between the following principal participants in the medical sector: private medical institutions; telemedicine entities; insurance agents and companies; pharmacies; diagnostic laboratories; private hospitals; academic medical centers, etc.

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