

DEVELOPMENT OF MEDICAL INFRASTRUCTURE OF TERRITORIAL COMMUNITIES OF UKRAINE IN THE CONDITIONS OF SECTORAL REFORMS

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Received 20 06 2023; Accepted 22 06 2023

Abstract

The healthcare sector is the most vulnerable and, along with the quality of life of the population, is at the top of the list of the most pressing issues today. The importance of this area is difficult to overestimate, as it applies to everyone, and the importance of ensuring the inalienable human right to health is growing every year. At the same time, creating optimal conditions for exercising the right to receive the necessary medical care for every citizen and achieving appropriate standards of quality of life and well-being of the population in Ukraine is part of the obligations under the Association Agreement between Ukraine and the European Union. With the reform of the health care system in Ukraine, the problem of optimizing medical infrastructure is on the agenda, because in accordance with the reform of budget decentralization, the maintenance of medical institutions has come under the direct authority of local authorities. Thus, the creation of competitive conditions for the maintenance and development of medical infrastructure and improving the quality of medical services is a necessary requirement of today and an urgent issue that requires clear strategic and operational decisions.

Keywords: *management of territories, people, medical infrastructure, territorial communities, decentralization, sectoral reforms.*

JEL Codes: *O18, O21, R11.*

Introduction

The modern organization of the health care system in Ukraine creates significant problems and risks. The current state of the health care system in Ukraine is unsatisfactory, its capabilities and potential are used very

inefficiently, and the lack of positive dynamics of key indicators of quality of life and health of the population, despite increased funding for the industry, indicates that the effect of the system on public health does not only increase,

it even decreases. The main problem of the current health care system in Ukraine is the inconsistency of the current model of health care, designed to operate in a planned economy, modern needs of society and the necessary requirements for quality of life and international standards of health care.

Rather high cost of medical services in Ukraine requires a territorial concentration of their centers to be able to provide them in larger quantities and upgrade medical equipment. Under these conditions, medical professionals will be able not only to increase the volume of services provided, but also to improve the quality of these services by expanding the possibilities of medical practice.

Today, Ukraine lags far behind its European neighbours in terms of life expectancy and mortality. Compared to the OECD average, Ukraine spends a much smaller share of its budget on health care, but a much larger share on security and the judiciary, as well as on social protection and education. The share of total budget expenditures allocated to health care in Ukraine is almost 5% lower than in OECD countries. In addition, consolidated health expenditures have declined as a share of GDP and as a percentage of the Consolidated Budget since 2015, as investment in economic infrastructure, education and security has gradually supplanted health expenditures. Thus, health care is one of the sectors supplanted by the five main priority sectors supported by the state at all levels of government, namely: economic activities (e.g. roads), security and the judiciary, education, housing and communal services and defense.

Literature review

Medical reform is one of the most complex and controversial issues on the agenda of Ukrainian society today. Medical reform is an important component of decentralization of power, as the old model of organization of the health care system of our state is extremely inefficient and therefore

needs to be reorganized, including the adoption of appropriate decisions by local communities. Reforming Ukraine's health care system requires transforming public administration mechanisms. The issue of financial support of both sectoral reforms and their directions is particularly acute, which actualizes the search for ways to improve the financial security system.

The study of the theoretical foundations of health care reform in Ukraine was carried out by such domestic scientists V. Bondarenko et al. (2020), B. Danylyshyn et al. (2022, 2023), A. Was et al. (2020), Y. Maksymiv et al. (2021), L. Simkiv et al. (2022). In particular, J. Berezhna (2012) researched the issue of the objective need for state regulation of health care development in Ukraine. T. Kaminska (2016) dealt with the development of quasi-market relations in the field of health care.

Scientist Z. Nadyuk (2019) studied the formation and improvement of the mechanism of state regulation of health care development. In turn, the researcher V. Malichenko (2017) considered international legal mechanisms in matters of safety in the market of medicines.

E. Ivanenko (2015) was engaged in research of financial provision of health care in the conditions of social and economic transformations. Such scientists as V. Babchenko and O. Andrushko (2019) studied the priority areas of health care reform. Instead V. Pashkov (2017) studied the development of state policy on social innovation in the field of health care, as well as legal support for health care reform.

Scientists have made an in-depth analysis of the state of the medical industry, identified areas for financing the health care system, identified key issues and suggested specific ways to improve its functioning. However, the implementation of numerous sectoral reforms, in particular in the direction of transition to market relations in the social sphere, has not led to positive and relevant to the new conditions transformations in the current health care system, which today continues to operate on old principles. This

situation has led to managerial, functional and infrastructural imbalances in the medical sector.

Most of these scientists believe that the infrastructure of the modern health care system is cumbersome and “stretched”, most medical institutions in Ukraine are low-capacity hospitals with worn-out fixed assets and outdated technical equipment. The current health care system in Ukraine is based on the Semashko model and provides strict management and funding procedures. Such system is not focused on meeting the real needs of the population and has been unable to respond to the excessive burden of change over time and new challenges of today. It was developed and formed in an era of lack of modern methods of communication and poor development of medical technology. In addition, it also ignores international trends of modernization and efficiency, for example, offering space for private sector initiatives.

After the collapse of the Soviet Union in 1991, it became clear that the Semashkov model of health care, which was successful in the USSR until the 1970s, did not correspond to the realities of a market economy. In all post-Soviet countries, including Ukraine, health care systems have undergone changes in the organization, financing and delivery of health services.

In the researcher in the field of health care L. Horoshkova (2020) in the monograph “Legislative support of health care reform in Ukraine” drew attention to the need to transform existing state and municipal treatment and prevention facilities from budgetary institutions to non-profit entities operating without budget funding as non-profit enterprises under contracts, including state order. Previously, the same author published a number of articles on this topic.

Further, researchers in other works, including V. Pashkov (2016) substantiated the need and possibility of transforming medical institutions from budgetary institutions into non-profit entities and predicted the possibility of the existence of medical institutions as business entities, provided they are created as

subjects of private law, emphasizing contracts of state order for medical care.

Therefore, according to the authors, state and municipal medical institutions should become non-profit entities, and if individuals or companies want to make a profit in the process of medical activities, it is necessary to create a medical institution, and the state should not interfere.

A study by the WHO Regional Office for Europe and the European Observatory on Health Systems and Policies analyzed the two decades of transformation in the health systems of 12 post-Soviet countries (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan), and it was found that transformations took place in all countries, but the pace, content and effectiveness of changes in health care in different countries differed significantly (Pashkov, 2017). The authors of the study note that studying the history of changes in health care systems with the identification of factors that slow down or distort the planned results is an important component in shaping an effective health care policy in the country.

Methodical approach

Improving health care is one of the main issues in the reform of the health care system, which is currently being actively implemented in Ukraine in the context of decentralization of power. The old model of the system, in which neither the doctor nor the medical institution is interested in the patient, has led to the fact that today life expectancy in Ukraine is on average 11 years less than in the EU and the world. Thus, the main task of the reform is to place the patient, his needs and health in the centre. The main thing to pay attention to when carrying out medical reform is to prevent the suspension of medical care to the population. You can't start from scratch, you need to gradually move from a centralized system to a decentralized model that works on other principles. It should therefore be emphasized that health care reform is not a vacuum reform,

it can only take place in conjunction with administrative-territorial reform, fiscal decentralization reform, education and a number of other sectoral reforms.

The study assessed the development of medical infrastructure of territorial communities of Ukraine in the context of sectoral reforms by analyzing various statistical surveys, including official sources of the State Statistics Service of Ukraine, data from the Ministry of Finance, information on socio-demographic characteristics and other living standards, expert interviews and thematic articles. The materials of the research were also normative legal acts related to the reform of the health care system of Ukraine at different stages. Historical, analytical and semantic methods are used.

The current state of the health care system in Ukraine is unsatisfactory, its capabilities and potential are used very inefficiently, and the lack of positive dynamics of key indicators of quality of life and health of the population, despite increased funding for the industry, indicates that the effect of the system on public health does not only increase, it even decreases. The main problem of the current health care system in Ukraine is the inconsistency of the current model of health care, designed to operate in a planned economy, modern needs of society and the necessary requirements for quality of life and international standards of health care.

In the process of reforming the health care system in Ukraine, it is important to identify the main stages of reforms, as well as key levels (links) of medical care to the population. The criteria for division into these levels are the type of medical service, the specifics of the complexity of its provision, the level of qualification of the doctor and the type of specialization of medical care. The basic assessment is the assessment of the foundation of the reform of the entire system of providing medical services to the population, namely the primary level of health care. Its development is the basis for reforming the health care system in Ukraine, as today only 20% of citizens first seek help at the primary level, the other 80%

use medical services at the secondary or tertiary level, thus increasing the burden on specialized departments. designed to serve patients in complex medical cases. As for the proportions observed in the world, there are other statistics: 80% of patients are treated by a primary care physician and only 20% of them are served in secondary and tertiary care facilities when there is a need for specialized care.

The issue of health infrastructure optimization and development in Ukraine is extremely important in reforming the health care system, as in accordance with the reform of budget decentralization, the maintenance of medical institutions has come under the direct control of local authorities. Thus, the study of the formation of the optimal medical network within territorial communities, as well as the creation of hospital districts (as an organized network of medical institutions of optimal number and composition, with a rational distribution of workload and the most efficient use of medical equipment that meets practical needs and capacity of the local community) is especially needed.

The main methods of analysis are the expert method, which is based on the assessment of actual economic and statistical indicators, as well as the method of subjective assessments.

Results

Medical infrastructure in Ukraine consists of three levels or links of medical care to the population: primary (outpatient), secondary (specialized) and tertiary (highly or highly specialized). In particular, the primary or outpatient unit is responsible for providing emergency care to the population, as well as care provided to patients by general practitioners at the place of residence or temporary stay. Primary care facilities include outpatient clinics, clinics and family physicians' offices. The secondary level provides for inpatient treatment with the involvement of specialized specialists. District and city hospitals of cities, villages and district centers work at this level. The tertiary level is

responsible for providing highly qualified medical care, namely: diagnosis of complex diseases and atypical abnormalities, pathologies and complications. Research institutes, specialized hospitals and hospitals operate at this level.

Primary health care is the foundation of the entire system of providing medical services to the population. The development of primary health care is the basis for reforming the health care system in Ukraine. Since the beginning of 2017, the first stage of medical reform has started in Ukraine, which consists in changing the principles of financing primary health care. The basis for reforming the medical sector was the adoption of a number of legal documents, including the Order approving the Concept of health care financing reform (dated 30.11.2016) and the adoption of two laws – “On the state financial guarantees of medical services and medicines” (dated 19.10.2017) and the Law of Ukraine “On Amendments to Certain Legislative Acts of Ukraine on Improving the Legislation on the Activities of Health Care Institutions” (dated 6.04.2017), which provides for the autonomy of state and municipal health care institutions. The adopted legislative acts provide for the transition of the health care system in Ukraine to financing on the basis of the model of state solidarity health insurance of citizens using the funds accumulated in the State budget.

In accordance with the reform, the principle of financing primary health care facilities has changed - polyclinics, outpatient clinics, primary health care centers. On their basis, a European-style family medicine system has been launched: every citizen of Ukraine will be able to freely choose a family doctor and sign direct agreements with them with a clearly defined scope of guaranteed services, and the state will direct funds to pay for services received by a citizen to a particular doctor or institution. Remuneration of physicians is based on the so-called “per capita norm”, which is calculated on the basis of the number of agreements concluded by the doctor and subject to compliance with medical protocols for treatment and diagnosis.

With regard to the constitutional right of Ukrainian citizens to receive free medical care, the government undertakes to guarantee a clearly defined scope of medical services. That is, every year the government calculates a guaranteed package of medical services for citizens, which is provided free of charge. It includes: emergency or first aid; primary care (services of primary care physicians, including some tests); palliative care; medical care for children under 16; medical care in connection with pregnancy and childbirth. Apart from the guaranteed list of medical services provided by the state free of charge, all other examinations and necessary medical care must be paid for by the citizen.

According to the new legislation, the independent insurance agency is responsible for the movement of funds between the state and the medical worker, which also carries out all the necessary document circulation procedures. The state will be able to buy medical services from suppliers of all forms of ownership within the guaranteed package, ensuring payment from a single national customer for medical services provided to citizens.

In addition, since the beginning of 2017, doctors in Ukraine have been officially allowed to work according to international guidelines for treatment and diagnosis (Ministry of Health Order №1422), which has been illegal so far. Therefore, according to the new legislation, a Ukrainian specialist can work according to the same instructions as a leading doctor of a German, Israeli or American clinic (Pashkov, 2017), in particular he can use the latest diagnostic and treatment methods and is not obliged to use standards which in some issues may be out of date.

Examining the issue of reforming the health care system in Ukraine, the issue of optimizing medical infrastructure is on the agenda, as in accordance with the reform of budget decentralization, the maintenance of medical institutions has come under the direct authority of local authorities. This, in turn, means that the authority to allocate funds for medical infrastructure has shifted from the

central to the territorial level: local government have the opportunity to set their own priorities for the development of medical institutions under their jurisdiction and thus stop competing for the attention of the central government. In turn, this allows to create competitive conditions for the optimization, maintenance and development of medical infrastructure and improve the quality of medical services.

Therefore, in order to form a single medical space, optimize the network of medical institutions and improve the quality of public medical institutions, as well as generally improve the health care system of the country, hospital districts were formed, which are a functional association of health care facilities located on the relevant territory, providing secondary (specialized) medical care to the population of this territory (Ivanenko, 2015). In fact, a hospital district is a network of medical institutions of optimal number and composition organized in a certain area, with a rational distribution of the workload of doctors and the most efficient use of medical equipment that meets the practical needs and capabilities of the local community. In this case, the population living in the district should not exceed 120 thousand people, and the ability to travel from the center of the district to any of the settlements should not exceed one hour.

The optimal medical network, which should be planned within each hospital district, according to certain criteria, provides for the presence of (Malichenko, 2015):

- multidisciplinary intensive care hospital;
- multidisciplinary children's intensive care hospital;
- rehabilitation hospitals;

- hospitals of planned treatment (clinical hospital);
- pathological center;
- hospice;
- specialized medical center (by areas);
- center for medical consultations and diagnostics;
- ambulance services.

Proposals to form the boundaries of the hospital district were submitted by the regional state administration, and the final list of districts and their composition was approved by the government. The administrative center of the hospital district is determined by the settlement, usually a city with a population of over 40 thousand people, which houses a multidisciplinary intensive care unit of the second level (Lehan, 2019). The boundaries of the hospital district were determined in such a way that the population of the respective territory had access to secondary (specialized) medical care.

The decision to establish hospital districts has caused concern among local officials, who have noted the possibility of speculation due to a number of inconsistencies in the document (Figure 1). Therefore, in November 2021, a new "Procedure for the creation of hospital districts" was adopted, which, however, no longer provides a clear definition of "hospital districts", but instead provides an interpretation of the category "capable hospital district network" - a set of health care facilities which carry out economic activities in medical practice in the manner prescribed by law and have the functional capacity to provide quality, comprehensive, continuous and patient-oriented medical care in accordance with socio-demographic characteristics of the population, especially its resettlement in the area.

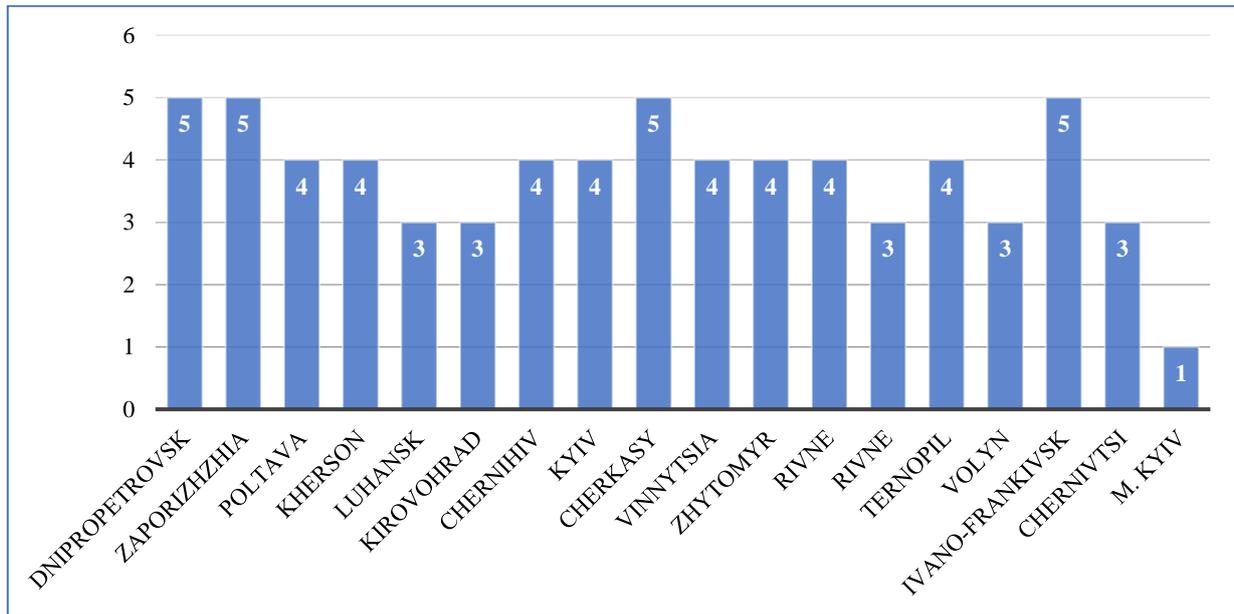


Figure 1. The composition of hospital districts of 17 regions and the city of Kyiv, approved for 2021

*Source: compiled by the author on the basis of orders of the Cabinet of Ministers of Ukraine “On approval of the list and composition of hospital districts” in 16 regions of Ukraine.

Since the beginning of the formation of hospital districts, local governments (regional, district, city councils, councils of united territorial communities), public organizations, health care facilities, medical unions and citizens have expressed different views on the conditions and procedure of forming NGOs. that indicates the presence of significant problems in this area. These primarily include:

- lack of constructive cooperation on the formation of hospital districts between different branches of executive power, as well as local governments;
- imperfection of regulatory and legal support of the process of creating hospital districts;
- inconsistency of the functioning of hospital districts with the new principles of financing the medical sector;
- unpredictable participation of local councils in the process of forming hospital districts;
- discrepancy between the boundaries of hospital districts with the boundaries of the newly formed United Territorial Communities (UTC);

- underestimation of regional features in the formation of hospital districts.

Unfortunately, the reform is not carried out publicly enough and, which is especially important, without taking into account the specifics of the regions. Interregional inequality in the provision of regions with doctors and beds in medical institutions has a significant impact on the formation of the network of hospital districts.

In these circumstances, we consider it necessary to create a method of calculating the need for physicians and medical institutions for certain areas (mountain or with a predominance of certain atypical settlements (farms, etc.), taking into account the demographic composition of their population and other specific features of the region - geographical features, production specialization, etc.

Here are some more important issues related to the creation of UTCs. These include:

- unresolved problem of accessibility of medical institutions within the UTC (high prices for fuel and travel tickets, which complicates the process of applying of patients from other areas);

- uneven distribution of UTCs by population (as a result of covering large areas with low population density or, conversely, densely populated);

- reduction of low-capacity but needed hospitals and the release of large numbers of health workers.

Thus, the most important issues at this level are the availability of medical care for the population, convenience and timeliness of transportation of citizens within the hospital district, the ability of the patient to receive the necessary medical services, as well as ensuring their effectiveness. These problems are especially acute in the absence of an adequate level of infrastructure: adequate road surface and transport links, ensuring its availability and frequency in remote areas of the district.

According to the results of the survey on self-assessment of the population's health status and the level of availability of certain types of medical care in 2021, 13.4% of the population suffered due to the absence of a health care facility or pharmacy near the home; 14.8% of the population did not have the opportunity to receive emergency (ambulance) services in a timely manner; almost a third of the population (29.7%) could not receive medical care or medicines if necessary.

Based on the survey data on the population's self-assessment of health status and the level of availability of certain types of medical care, the reasons why individuals could not receive these services, most of them call the high cost of the latter (Figure 2). Other reasons include the lack of medical specialists of the required profile, long queues and others.

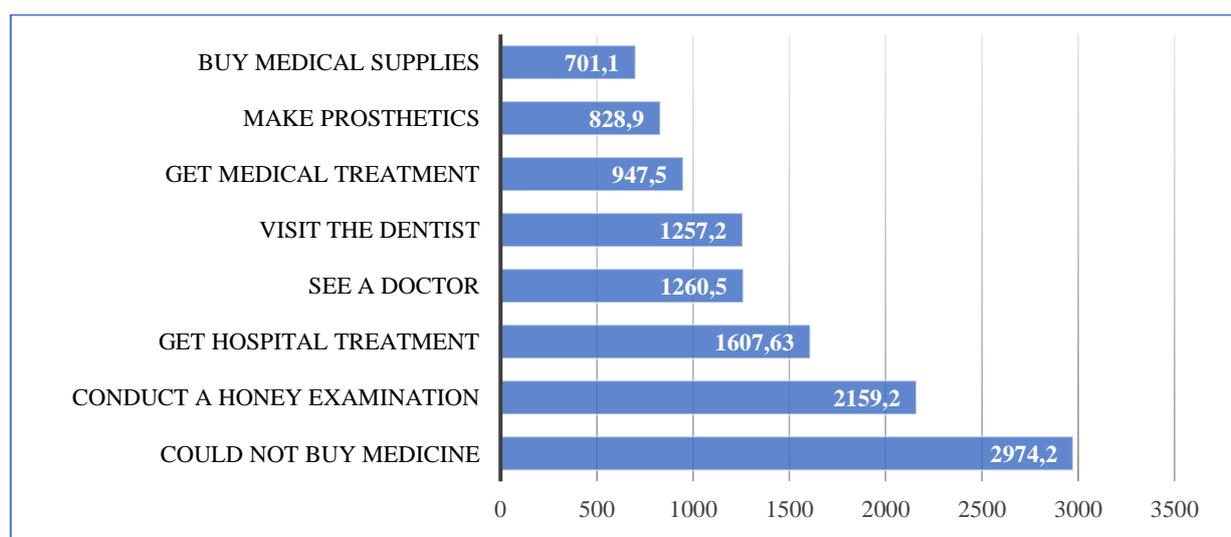


Figure 2. Distribution of households whose members could not receive medical care, in terms of types of medical services at the beginning of 2020, thousand units

**Source: built on data (State Statistics Service of Ukraine, 2022).*

There is a lot of talk in public discourse today about the implementation of health care reform. Therefore, understanding the changes, the level of their awareness and support of innovations by medical workers is the key to successful implementation of medical reform on the ground. In view of this fact, in November-December 2017, the Mykolayiv Center for Sociological Research conducted a survey among primary health care workers.

This made it possible to identify the level of awareness of respondents and sources of information about the reforms taking place in the field of health care, the level of support for innovation offered by health care reform and the assessment of its possible consequences.

The study found a level of support for innovation, which proposes the introduction of health care reform (Figure 3).

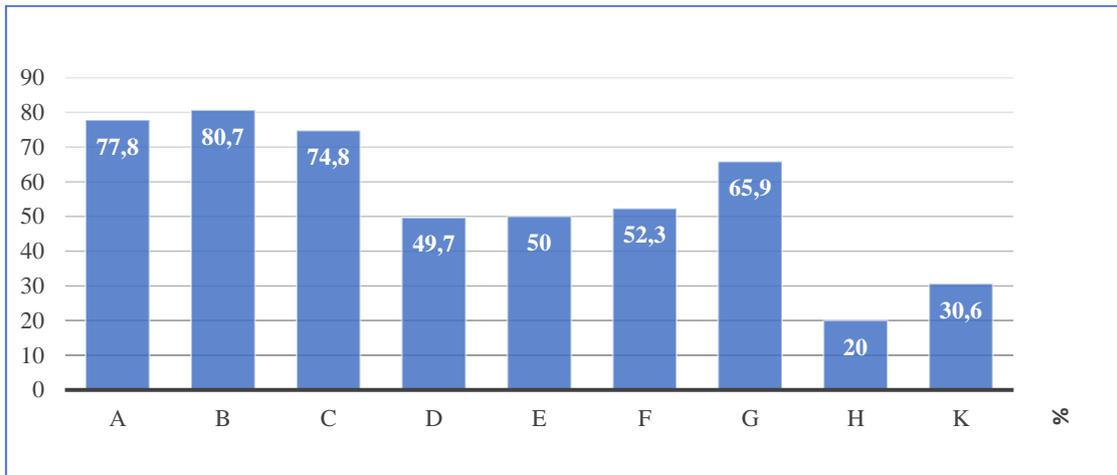


Figure 3. The level of public support for innovations envisaged as a result of the introduction of health care reform

*Source: built by the author on the basis of data (Sociological survey results, 2017).

A - introduction of free services (tests, research, drugs)

B - restoration of medical services in rural areas

C - state coverage of medical guarantees

D - restructuring and reorganization of medical institutions

E - appeal to a specialist only under the direction of a family doctor

F - introduction of telemedicine (operational counseling by narrow specialists)

G - retraining of paramedics and ambulance doctors, the emergence of new paramedics

The survey found a level of support for innovation that proposes the introduction of health care reform. The greatest support in both studied categories was received by “introduction of free services (tests, research, medicines)” (77.8%), “restoration of medical services in rural areas” (80.7%), “state coverage of medical guarantees” (74.8%). Innovations such as “restructuring and reorganization of medical institutions” (49.7%), “referral to a specialist only under the direction of a family doctor” (50%), “introduction of telemedicine (operational counseling by specialists)” (52.3%), “Retraining of paramedics and ambulance doctors, the emergence of new paramedics” (65.9%) did not support almost half or more

respondents. Ambiguous attitude to such innovations as “abandonment of tariff grids and free formation of the wage market” (20%), “creation of the National Health Service of Ukraine” (30.6%).

Usually, changes bring new consequences. Today, among the first consequences of health care reform, experts see: “reduction of health workers” (16.7%), “outflow of specialists abroad” (15.4%), “reduction of health care facilities” (15%), “inability of local authorities to effectively sell large sums of money” (10.3%). At the same time, 10.3% and 8.9%, respectively, received such consequences as “retraining of specialists” and “increasing the competitiveness among employees”, which meet the objectives of the reform itself.

Among other answers, some respondents said that the first consequences of health care reform would be: “increased neglect of diseases and deaths”, “unavailability of care for the elderly and seriously ill”, “complete disorder in the health care system caused by outflow of personnel, in the absence of a systematic approach to reform”, “a large number of patients at the door of doctors, complaints and refusal of home visits”, “reduction of medical care and training of health workers”, “unavailability of medical services”.

Conclusions

The results of a sociological survey showed a low level of awareness of health professionals in the field of reform. Consequently, ignorance of the specific mechanisms of reform leads to a lack of understanding of the processes themselves, and hence to a lack of dialogue between the health worker and the patient, which makes it impossible to effectively implement health reform at the regional level. Therefore, the discussion of the research results contributes to a deeper understanding of the nature and determinants of the process of reforming domestic medicine, the development of practical recommendations for optimizing the process of implementing legislative initiatives.

The idea of creating hospital districts is designed to bring specialized care to patients, but under current conditions, this could lead to a reduction in low-capacity but needed hospitals and the release of large numbers of health workers. This is where the problem arises - staffing, which will inevitably arise when the status of hospitals changes. First, there are dozens of fired trained medical professionals, and second, the shortage of highly qualified doctors for new specialized departments, which must be established in accordance with the regulations prescribed by law for the hospital district. There is a question with employment of graduates of medical

institutions both in the aspect of formation of client base of family doctors, and in a question of stimulation of their employment in medical institutions of primary level, especially in rural areas. In addition, the formation of appropriate human resources takes decades, and today in some areas there is a shortage of qualified physicians. Thus, the formation of hospital districts and the restructuring of medical infrastructure raises a number of accompanying problems that require additional resources and time.

In addition, Ukraine has not yet decided on a model for the development and management of health care that should replace the current system. This model should clearly define not only the organizational, legal and financial-economic mechanisms of modern decentralization reform, but also the priorities of integrated development of domestic medicine, which will form a strategic vision of its development and not only in the context of improving the efficiency of medical institutions services provided to the population, but also in the context of improving the quality of staffing, introduction of innovations and modern technologies, availability of quality medical services regardless of place of residence, dissemination of insurance medicine, improving social justice and protection of citizens' rights in general.

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