

UDC 614.2

DOI: 10.15587/2519-4798.2022.256383

FOREIGN EXPERIENCE OF ANTI-CRISIS MANAGEMENT OF MEDICAL INSTITUTIONS

Katherine Shchyrina, Svitlana Koshova, Oksana Parkhomenko-Kutsevil

The main components of the crisis management system of medical institutions were highlighted. Crisis situations will be understood as the inability of medical institutions to provide the population with medical services on time due to lack of various resources.

As a result of catastrophes, natural disasters, armed conflicts, crisis situations arise when medical institutions are not able to fully provide the population with medical services, there is a lack of funding, human and material resources. Ukraine is no exception, as the armed conflict in the East in 2014 and Russia's full-scale invasion of Ukraine confirmed the lack of sufficient labor, logistical resources and financial support to provide quality medical care to the population. In such conditions, there is a need to develop tools, means of overcoming crisis situations in healthcare facilities.

The aim of the article is to systematize the recommendations for Ukraine on the formation of a system of crisis management of healthcare facilities.

Materials and methods of the research. The basis for the study were provided by private clinics for analysis documents of financial and economic reporting for the pre- and post-crisis periods, as well as scientific works of famous Ukrainian and foreign scientists. The research used methods of analysis, comparison, medical and statistical method and system.

The result of the study was an analysis of the state of funding for healthcare facilities in Ukraine and a comparative analysis with the state of funding for such facilities in other developed countries such as Italy, Germany, Sweden, France.

Conclusions. The main components of the system of anti-crisis management of medical institutions in crisis conditions are: effective leadership, which is provided by managers and management staff; human resources; equal access to basic medicines, vaccines and technologies of guaranteed quality, safety, efficiency; a functioning health information system has been established; financing of healthcare institutions and their financial protection in case of crisis; the process of providing quality, safe and efficient medical services with minimal expenditure of resources. In most European countries, the basic functions of healthcare management (prioritization, financing, service delivery, supply planning, quality control) are decentralized and carried out at the level of regional or local authorities, or regional health insurance funds or trusts

Keywords: medical institutions, anti-crisis management, anti-crisis management, crisis situations, healthcare system

How to cite:

Shchyrina, K., Koshova, S., Parkhomenko-Kutsevil, O. (2022). Foreign experience of anti-crisis management of medical institutions. ScienceRise: Medical Science, 2 (47), 44–50. doi: <http://doi.org/10.15587/2519-4798.2022.256383>

© The Author(s) 2022

This is an open access article under the Creative Commons CC BY license hydrate

1. Introduction

The Sixty-fourth World Health Assembly (WHO) adopted a resolution in May 2011 on “Strengthening National Health Capacities and Preventing Emergencies to Sustainable Health Systems”. In many countries, the risks of catastrophes and natural disasters have increased, and there is a need to strengthen healthcare systems. As a result of catastrophes, natural disasters, armed conflicts, crisis situations arise when medical institutions are not able to fully provide the population with medical services, there is a lack of funding, human and material resources. Ukraine is no exception, as the armed conflict in the East has confirmed the lack of sufficient labour, material and technical resources, financial support to provide quality medical care to the population. In such conditions there is a need to develop tools, means of

overcoming crisis situations of healthcare institutions. Crisis situations are understood as the inability of medical institutions to provide the population with medical services on time due to lack of various resources. First, the state must ensure the formation of an effective mechanism of anti-crisis management of medical institutions at the national level. While medical institutions should be responsible for equipment, technology of medical care, qualified medical staff, diagnostic equipment and so on.

Anti-crisis management of the system of healthcare facilities involves systematic process management to bring medical facilities out of crisis on the basis of systemic changes. Management should be based on the management of public and private institutions.

The work of many scientists is devoted to the study of anti-crisis management of the healthcare system.

In particular, [1, 2], – the experience of building models of the healthcare system in different countries is systematized, in the works [3, 4], systematized the experience of building models of the healthcare system and the practice of financing, health insurance. Scientists [5, 6] in their works studied the organization of primary care, crisis care. However, there are no comprehensive studies of foreign experience in crisis management of medical institutions.

The aim of the article is to systematize the recommendations for Ukraine on the formation of a system of crisis management of medical institutions.

2. Materials and methods

The basis for the study were provided by private clinics for analysis documents of financial and economic reporting for the pre- and post-crisis periods, as well as scientific works of famous Ukrainian and foreign scientists. Ukrainian databases were used, among which are information resources and literature provided by the National Library of Ukraine named after V. I. Vernadsky.

The basis for the study were provided by private clinics for analysis documents of financial and economic reporting before and after the crisis, as well as scientific works of famous Ukrainian and foreign scientists. The research used method of economic analysis, comparison, medical and statistical method. With the usage of economic analysis, the formation and development of health care were studied, by identifying and determining the relationship and changes in its parameters, quantitative and qualitative measurement of the impact of individual factors and their combination on changes that occurred in connection with changes in its legal form (reform); systems approach – made it possible to study the object as a whole set of elements in the set of relationships and connections between them, i.e., the consideration of the health care institution as a model of the system. With the help of systemic approaches, the article developed the connection (philosophy), attitude, content and form, partly and in whole, i.e., all components of the health care institution in a crisis and how to overcome it.

3. Result

The WHO defines the healthcare system as one that contains all the resources, efficient organization and health facilities that provide interdependent action aimed primarily at improving, maintaining, or restoring health.

The system of crisis management of medical institutions in accordance with the WHO methodology should include the following main components:

1. Effective leadership, which is provided by managers and management staff, which is the most critical and responsible area of management in crisis situations. Successful leadership and management of health facilities requires a strategy that is combined with control and oversight functions, coalition building, accountability, appropriate rules, and incentives. Effective coordination structures, partnerships and advocacy, relevant up-to-date decision-making information, public information strategies, monitoring and evaluation of the current situation are also needed.

2. Health workers (human resources) include all health workers who take part to protect and improve the

health of the population. It is the staff that ensures the quality of medical services, their timeliness, considering the available resources and conditions. This requires a fair distribution of sufficient staff in different areas of responsibility. Workers must be competent and productive, especially in times of crisis. The crisis preparation program should provide assessment of training needs, development of curricula and training materials, organization of training courses.

3. A well-functioning healthcare system ensures equal access to essential medicines, vaccines and technologies of guaranteed quality, safety, efficacy, and their scientifically sound and cost-effective use. Medical equipment and supplies for hospitals, emergency medical services, medical pharmaceutical services, laboratory services and blood emergency services required in the case of a crisis are also covered by “medicines, vaccines and technology”.

4. A well-functioning healthcare information system is a system that ensures the production, analysis, dissemination and use of reliable and timely information about the determinants of health, the efficiency of the system and the state of health of the population. The health information system also covers data collection, analysis, and reporting. This includes data collected through risk and needs assessments (hazards, vulnerabilities, and potentials) and data related to early warning systems and general information management.

5. The healthcare financing system should ensure the availability of adequate funds for the financing of healthcare facilities and their financial protection in the event of a crisis. In addition to providing funding for key crisis management programs in the health sector, this provides access to basic services for crisis victims. With an effective funding system, medical facilities and equipment are adequately insured against damage or loss.

6. Provision of services is a process of providing quality, safe and effective medical services with minimal expenditure of resources. The crisis preparedness process provided by the WHO health system allows for a review of the organization and management of services, the sustainability of health facilities, and the quality, safety, and continuity of care in health facilities during the crisis.

According to the WHO (Tab. 1), Ukraine lags significantly behind the EU in terms of financing the healthcare system.

Ukraine has the lowest per capita healthcare costs; \$ 125 per 1 person, while in European countries these costs are much higher. The share of healthcare expenditures in GDP is close to that in Poland, while in other countries it averages 10.3 %. Current per capita health expenditures at purchasing power parity are also low at \$ 469.4. in Ukraine, while in other countries an average of 4658 dollars for 1 person. At the same time, domestic private healthcare expenditures as a percentage of current healthcare expenditures in Ukraine are 51.5 %, in foreign countries on average 20.3 %, i.e., the burden on the population in Ukraine at a low level of purchasing power, wages and the high cost of medical services is high. At the same time, as found in a study [5], in Ukraine there is no voluntary health insurance, state compulsory health insurance, which causes shadowing of payment for medical services. Thus, the population's out-of-pocket expenditures

on current healthcare expenditures in Ukraine are 47.8 %, while in developed countries they average 16 %. Thus, in

world practice, voluntary health insurance provides 5–7 % of funding for the healthcare system.

Table 1

The main indicators of financial peculiarities and staff of the healthcare system of Ukraine and some European countries as of 2017

Indicator	Ukraine	Poland	Germany	France	Italy	Norway	Spain	Sweden
Current per capita health expenditures in US dollars	125.0	796.7	4591.8	4026.1	2700.4	7464.1	2353.9	5600.1
Current health expenditure as a percentage of gross domestic product (GDP) (%)	6.1	6.3	11.2	11.1	9.0	10.0	9.2	11.0
Current expenditures on healthcare per capita at purchasing power parity	469.4	1704.2	5356.8	4542.3	3350.6	6221.6	3182.5	5298.6
Domestic private health expenditure as a percentage of current health expenditure (%)	51.5	29.9	15.5	21.1	25.1	14.6	29.0	16.3
Expenditures of the population "out of pocket" as a percentage of current expenditures on healthcare (%)	47.8	23.2	12.5	6.8	22.8	14.3	24.2	15.2
Doctors, per 10,000 population	30.1	24.0	42.1	32.3	40.9	46.3	40.7	54.0
Doctors, people	134986.0	91730.0	344775.0	209367.0	242965.0	24583.0	188595.0	53119.0
Nurses and obstetricians, per 10,000 population	70.6	57.2	132.0	96.9	58.7	181.2	55.3	115.4
Nurses and obstetricians, persons	316771.0	218723.0	1081000.0	627062.0	348403.0	96.2	256333.0	113558.0

Source: [7–14].

Extremely important are the characteristics of the coverage of the population with insurance when receiving primary care and when purchasing prescription drugs, which in almost all countries is 95–100 % (except Ireland – 33 % for medical care, 30 % for medicines; Cyprus – 80 % and 35–40 %, respectively, no data on Turkey) [15].

There are four types of ambulance crews in the modern Polish healthcare system: transport crews (for transporting patients who do not need intensive care; for transporting biological materials (donor organs, blood, etc.)); basic brigades; specialized teams; air rescue teams. The personnel of such brigades are different. To obtain a lifeguard certificate, you must successfully complete training in qualified first aid (66 hours). Such a certificate is valid for three years and to continue its validity you need to retake the qualifying exam [4].

About 98 % of the population of Poland are payers of compulsory insurance premiums. The state insurance body is the National Health Fund (NFZ). There are several legal acts in the country, which determine the direct implementation of medical practice separately by state and non-state institutions, as citizens have the opportunity to choose the institution in which they can receive the services they need. In general, the functioning of the medical sphere has twofold control: on the one hand the quality of the healthcare system is assessed by the degree of satisfaction of patients with services, and on the other – by assessing compliance with medical

regulations, rules, and principles, which are regularly assessed by indicative indicators [3].

Petrushka O. V. [16] concludes that different health insurance systems of foreign countries have a certain, special type of insurance and in practice there is no single correct, universal model of insurance that would suit all countries. Despite different sources of funding, the healthcare systems of foreign countries share common goals: high efficiency of healthcare, improving the quality of services and their accessibility to a wide range of people. Therefore, the reform of the medical sector in Ukraine should begin with a study of the main advantages and disadvantages of existing models of global health insurance systems.

The costing strategy at the level of individual hospitals also has its own characteristics. To date, medical institutions, regardless of ownership, are forced to organize effective management and financial and economic activities [17]. And if private hospitals have always cared about finding alternative sources of funding, now budget institutions must look for additional sources of funding to take care of their logistics and staffing. To achieve this goal, the heads of medical institutions are forced to use various methods of strategic planning and, above all, to plan their own costs. They are required to monitor their current activities, regular analysis of the current financial and economic situation (for the budget sphere – analysis of the level of efficient allocation and use of resources),

In Sweden, rescue teams are trained at state training centres, according to approved programs and protocols for medical care for victims of emergencies, both peaceful and military. The purpose of the training is to develop skills in helping victims of fires and explosions, floods and other disasters.

The ambulance system in France is based on medical personnel who have undergone special program training and are personnel specialists of special institutions (medical and medical training, firefighters, police, transport). Training is also provided in special training centres. After graduation, the rescuer must annually confirm the level of theoretical knowledge and practical skills [1].

The healthcare system in France is characterized by a combination of mandatory public programs and the private health insurance sector. In this case, the patient has the right to freely choose the provider of medical services. Universal access to health services is provided through the national health insurance system, which covers 99 % of the French population. As the national health insurance system is not comprehensive and allows only basic healthcare, 87 % of citizens are registered in voluntary health insurance programs, and medical care for the poorest is provided by charities [2].

In Germany, medical care for threatening conditions is provided by specially trained doctors, but paramedics are allowed to provide such care. In the event of an emergency, a leading doctor with 4 years of experience in the specified system is appointed head of the medical service. Previously, the leading doctor of the region must undergo special training, have theoretical and practical experience in this field, be well acquainted with the organizational and staffing structure of its subordinate institutions and rescue services, clarify emergency preparedness plans. Compulsory health insurance covers 90 % of the population of Germany. Germany's health insurance system solves its financial issues autonomously and independently of the state treasury.

The advantages of the German healthcare system include high quality of medical care, medical equipment of treatment and prevention facilities, qualifications of medical staff and, most importantly, the availability of medical care for all segments of the population. The health insurance system provides the population with a wide range of free services, including disease prevention, outpatient and inpatient treatment, prescription drugs, medical equipment, fare to a medical institution, etc. [6].

Italy's healthcare system is characterized by a significant level of decentralization, and its funding is predominantly public, with a small share of co-financing of health services by the population. The state has established a minimum guaranteed level of medical services for citizens, as well as defined the conditions for receiving medical care from private institutions. Despite the universality of the Italian healthcare system, it is too bureaucratic, in general, the level of healthcare in Italy is lower than the average in the European Union [2].

In most European countries, the implementation of the basic functions of primary healthcare management (PHC) (prioritization, funding, service delivery, supply planning, quality control) is fairly decentralized and carried out at the level of regional or local authorities, or regional health insurance funds or trusts. PMD. Centrally

at the national level PMD is implemented only in 6 countries (Estonia, Hungary, Latvia, Malta, Slovakia, and Switzerland), small in size and with a relatively small population [15].

The state form of financing is based on the concept of W. Beveridge, which is that the healthcare system is financed by targeted taxation, and medical care is available to all segments of the population. Medical staff receive a salary depending on the number of patients they serve. This system dominates in many developed countries and is implemented in the UK, Denmark, Ireland, Canada and other countries. Its advantages include the general availability of medical care, state control over costs, fair distribution of funds [5, 18].

According to the study [15], the strength and efficiency of PMD systems are not directly related to the level of economic development of the country. More important conditions for the formation of a strong PMD are coherence and balance within the system of structural and process aspects, their individual components. It is recognized that the key to the effectiveness of the PMD system is to increase the availability, coordination of assistance using the principle of the goalkeeper and providing it with the necessary economic resources. In Ukraine, there is a clear trend towards the development of PMD as one of the leading components of the healthcare system. However, the PMD system remains very weak, primarily due to the lack of systematic and consistent management decisions on the directions, models and mechanisms of PMD development.

According to the integrated characteristics, the Netherlands, Spain, Great Britain, Portugal and Italy are in the top five countries with the highest level of governance in the PMD system (2.6–2.1 on a 3-point scale as they decrease); in the last five (2.1–2.25 points as they increase) – Switzerland, Cyprus, Luxembourg, Hungary and Iceland [15].

5. Discussion of research results

If we compare the results of our study with the results of research by other scientists, it should be noted that in this article compared with the studies of [1, 2] not only systematized but also analyzed the state financing of healthcare institutions in Ukraine and other developed countries. The study we have described is limited by the fact that it is funded by the authors' own funds and in wartime, the inability to obtain more information on the activities of health facilities that interest us.

Study limitations. It is also worth noting that the construction of a model of crisis management of health care facilities is possible if the analysis and study of not only one institution, but also health care facilities of different levels of subordination.

Prospects for further research. The issues of effective financing, search for alternative sources of funding for healthcare facilities in the crisis remain open to research, and the issues of anti-crisis management of healthcare facilities in wartime and in case of physical destruction of the facility's infrastructure are still relevant and open to the study. Russia's full-scale invasion of Ukraine, the destruction of infrastructure, including health facilities, has posed new challenges to Ukraine's healthcare system.

6. Conclusions

The main components of the crisis management system of health care facilities are a number of the following components: effective leadership, personnel management and human resource development. We also include in these components equal access to basic medicines, vaccines and technologies of guaranteed quality and safety.

Another important component is a well-established health information system, financing of health care facilities and their financial protection in crisis conditions. And completes the set of components of the anti-crisis management system of health care facilities the process of providing quality, safe and effective medical services with minimal expenditure of resources.

The experience of foreign countries shows that effective modules of health care management have been built through certain measures and tools. They include an effective financing mechanism based on public or private voluntary health insurance. Also, insurance when receiving primary care and when purchasing prescription drugs and an effective ambulance system. Effective management and financial and economic activities are also important; various methods of strategic planning and, above all, to planning one's own ex-

penses; special program training of personnel for crisis situations. It is impossible to build effective modules without medical care during threatening conditions, provided by specially trained doctors; without medical equipment of medical and preventive institutions, high qualification of medical workers and availability of medical care for all segments of the population; the minimum guaranteed level of medical services for citizens has been established. In most European countries, the basic functions of health care management (prioritization, financing, service delivery, supply planning, quality control) are fairly decentralized and carried out at the level of regional or local authorities, or regional health insurance funds or trusts.

Conflict of interests

The authors declare there is no conflict of interests.

Financing

The authors used their own sources of funding.

Acknowledgment

We are grateful for the help and advice on certain issues about the research to prof. Tolstanov O. K., prof. Hbur Z. V., prof. Mykhalchuk V. M.

References

1. Bakai, A. Ye. (2017). Pidhotovka medychnykh kadriv dlia roboty v nadzvychainykh sytuatsiakh: mizhnarodnyi dosvid. Available at: <http://ir.nmapo.edu.ua:8080/jspui/bitstream/lib/4700/1/Тези-макет2017.pdf> Last accessed: 07.11.2019
2. Vetokha, N. Yu., Sabetska, T. I. (2018). Stratehiia finansuvannia zakladiv okhorony zdorovia: zarubizhnyi dosvid. Ivano-Frankivskiy navchalno-naukoviy instytut menedzhmentu TNEU, 113–117. Available at: <http://dSPACE.tneu.edu.ua/bitstream/316497/33220/1/Сабецька%20Т.І.%2С%20Вєтоха%20Н.Ю..pdf> Last accessed: 07.11.2019
3. Vovk, V. M., Kister, A. (2016). Modeliuvannia stratehii formuvannia vytrat u polskykh likarniakh u konteksti instytutsionalizatsii. Visnyk NUVHP, Serii «Ekonomichni nauky», 2 (74), 39–56.
4. Korol, A. (2019). Analiz dosvidu derzhavnoho upravlinnia nadanniam ekstrenoi medychnoi dopomohy u respublitsi Polshcha ta mozhlyvist yoho vykorystannia v Ukraini. Pressing Problems of Public Administration, 1 (55), 175–182. doi: <http://doi.org/10.34213/ap.19.01.23>
5. Onyshko, S. V., Shevchuk, Yu. V. (2016). Problemy finansuvannia i perspektyvy rozvytku medychnoho strakhuvannia v Ukraini. Intelekt XXI, 5, 158–162.
6. Shomnykova, A. V. (2017). Foreign experience of organization and planning of medical services' market infrastructure. Scientific Papers of the Legislation Institute of the Verkhovna Rada of Ukraine, (5), 95–104. doi: <http://doi.org/10.32886/instzak.2017.05.14>
7. Current health expenditure (CHE) as percentage of gross domestic product (GDP) (%). Available at: <http://apps.who.int/gho/data/node.main.GHEDCHEGDP2011?lang=en> Last accessed: 07.11.2019
8. Current health expenditure (CHE) per capita in PPP. Available at: <http://apps.who.int/gho/data/node.main.GHEDCHEpcPP2011?lang=en> Last accessed: 07.11.2019
9. Current health expenditure (CHE) per capita in US\$. Available at: <http://apps.who.int/gho/data/node.main.GHEDCHEpcUS2011?lang=en> Last accessed: 07.11.2019
10. Domestic private health expenditure (PVT-D) as percentage of current health expenditure (CHE) (%). Available at: <http://apps.who.int/gho/data/node.main.GHEDPVTDCHE2011?lang=en> Last accessed: 07.11.2019
11. Medical doctors. Available at: <http://apps.who.int/gho/data/node.main.HWFG2011?lang=en> Last accessed: 07.11.2019
12. Alshrafi, M. A. Y. (2016). Derzhavne antykrizove upravlinnia medychnoiu haluzziu. Ekonomika i upravlinnia medychnoiu haluzziu, 2 (22), 34–43.
13. Nursing and midwifery personnel. Available at: <http://apps.who.int/gho/data/node.main.HWFG2011?lang=en> Last accessed: 07.11.2019
14. Out-of-pocket expenditure as percentage of current health expenditure (CHE) (%). Available at: <http://apps.who.int/gho/data/node.main.GHEDOOPSCHE2011?lang=en> Last accessed: 07.11.2019
15. Lekhan, V. M., Kriachkova, L. V., Volchek, V. V., Rostochylo, S. S. (2016). Comparative analysis of the approaches to the development of primary health care in European countries and in Ukraine. Ukraina. Zdorovia natsii, 4 (40), 149–161.
16. Petrushka, O. V. (2017). Peculiarities of functioning of medical insurance models in economically developed countries. Available at: http://dSPACE.tneu.edu.ua/bitstream/316497/25375/1/Stattya_Petrushka%202017.pdf Last accessed: 07.11.2019
17. Kister, A., Kwit, T. (2013). Organizational changes propositions in hospitals based on diagnosis of medical staff knowledge. Zadar: International Conference MakeLearn.

18. Shyrfi, M. A. A. (2016). Formation of the organizational-economic mechanism of crisis management medical industry. Chasopys ekonomichnykh reform, 3 (23), 6–12.

Received date 17.12.2021

Accepted date 12.01.2022

Published date 31.03.2022

Katherine Shchyrina, Postgraduate Student, Department of Healthcare Management and Public Administration, Shupyk National Healthcare University, Dorohozhytska str., 9, Kyiv, Ukraine, 04112

Svitlana Koshova*, PhD, Associate Professor, Department of Healthcare Management and Public Administration, Shupyk National Healthcare University, Dorohozhytska str., 9, Kyiv, Ukraine, 04112

Oksana Parkhomenko-Kutsevil, Doctor of Science in Public Administration, Professor, Head of Department, Department of Public Administration, Hryhorii Skovoroda University in Pereiaslav, Sukhomlyns'koho str., 30, Pereiaslav, Ukraine, 08401

**Corresponding author: Svitlana Koshova, e-mail: svet.lana.koshova@gmail.com*