

Ivanyuk A. V. The development of the infrastructure of outpatient-polyclinic institutions that provide cardiological aid and factors of their success. *Journal of Education, Health and Sport*. 2023;13(2):331-338. eISSN 2391-8306. DOI <http://dx.doi.org/10.12775/JEHS.2023.13.02.047> <https://apcz.umk.pl/JEHS/article/view/43843> <https://zenodo.org/record/7896780>

The journal has had 40 points in Ministry of Education and Science of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of December 1, 2021. No. 32343. Has a Journal's Unique Identifier: 201159. Scientific disciplines assigned: Physical Culture Sciences (Field of Medical sciences and health sciences); Health Sciences (Field of Medical Sciences and Health Sciences).

Punkty Ministerialne z 2019 - aktualny rok 40 punktów. Załącznik do komunikatu Ministra Edukacji i Nauki z dnia 1 grudnia 2021 r. l.p. 32343. Posiada Unikatowy Identyfikator Czasopisma: 201159. Przypisane dyscypliny naukowe: Nauki o kulturze fizycznej (Dziedzina nauk medycznych i nauk o zdrowiu); Nauki o zdrowiu (Dziedzina nauk medycznych i nauk o zdrowiu).

© The Authors 2023;

This article is published with open access at Licensee Open Journal Systems of Nicolaus Copernicus University in Torun, Poland

Open Access. This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited. This is an open access article licensed under the terms of the Creative Commons Attribution Non commercial license Share alike. (<http://creativecommons.org/licenses/by-nc-sa/4.0/>) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited.

The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 01.02.2023. Revised: 10.02.2023. Accepted: 24.02.2023.

THE DEVELOPMENT OF THE INFRASTRUCTURE OF OUTPATIENT-POLYCLINIC INSTITUTIONS THAT PROVIDE CARDIOLOGICAL AID AND FACTORS OF THEIR SUCCESS

A. V. Ivanyuk

State Enterprise "Institute of Heart of the Ministry of Health of Ukraine",
Kyiv, Ukraine

Abstract

The purpose. To identify the key success factors in the development of the infrastructure of outpatient polyclinic institutions (OPPIs) that provide cardiac care. The conditions of their development based on the principles of public-private partnership (PPP) are taken into account. **Materials and methods.** The research was conducted according to the program based on general scientific methods of analysis, synthesis, generalization, interpretation of scientific data, as well as systemic and structural-functional approaches. **Results.** Significant problems in OPPIs that provide cardiac care infrastructure organization and management were identified. The data obtained showed the need to take measures for financing, organization of a high-tech production process, implementation of modern economic mechanisms in their work are necessary. This determined the search of mechanisms for the joint functioning of the state and business, the development of PPP in health care. The main mechanisms of PPP functioning were highlighted, namely organizational-legal, financial-investment, technical-organizational aspects. The benefits of cooperation for the state and the private partner are determined. A conceptual model of the key factors for

achieving success in the development of OPPIs infrastructure based on PPP principles has been developed. Their role in the activities of OPPIs is indicated. **Conclusions.** The model of key factors for achieving success in the modernization of OPPIs infrastructure proposed in the article is a promising direction in the development of medical establishments that provide cardiac care. PPP is a promising direction in the development of the infrastructure of health care institutions in Ukraine.

Key words: infrastructure of outpatient polyclinic institutions; cardiac care; infrastructure; public-private partnership.

Introduction. Under modern conditions the factor that initiates the development of infrastructure in health is the interaction and effective cooperation of the domestic entrepreneurial potential with the state. Public-private partnership (PPP) is a form of such cooperation. Currently, one of the priority areas of development of PPP mechanisms over the world is the implementation of economic policy regarding the forced development of innovative entrepreneurship in health care [2].

The word infrastructure translated from Latin means "the basis of construction", that is, a set of basic elements of the outpatient polyclinic institutions (OPPI) activity - managerial system, personnel support, financing, the organization of the production process, etc., which together ensure the activity of OPPIs.

The main task of the OPPI infrastructure functioning is to ensure the production process. The production infrastructure in the OPPI, in addition to maintaining the normal functioning of the process of production of medical services, also serves to reproduce labor resources in the national economy [3].

Modern realities are such that the effectiveness of the OPPI depends on the modernization of its infrastructure in partnership with private business. Strategic partnership allows to use PPP successfully even in non-profit or low-profit social sectors such as health care and education [4].

At the moment, the legal and institutional foundations for the implementation of PPP mechanisms in health care have been created in Ukraine [5, 6, 7].

For the functioning of the production infrastructure, first of all, it is necessary to determine the strategy for the development of OPPI based on PPP principles, taking into account the conditions in which the medical establishment develops, because in any field there are individual success factors.

The purpose. To identify the key factors for achieving success in the development of the infrastructure of outpatient polyclinic institutions (OPPIs) that provide cardiac care, taking into account the conditions of their development based on the principles of public-private partnership (PPP).

Materials and methods. The research was conducted according to the program, the basis of which was general scientific methods of analysis, synthesis, generalization, interpretation of scientific data, as well as systemic and structural-functional approaches.

The results

Based on the analysis of the infrastructure of OPPIs that provide cardiac care, it was found that the main problems of the organization of cardiac care are underfunding of health care facilities, uneven staffing of doctors and mid-level medical workers, low wages of medical personnel, insufficient equipment of OPPIs with medical equipment, etc. [1, 8].

The data obtained showed that it is necessary to find measures to ensure sufficient financing of the medical institutions under study, the introduction of modern economic mechanisms into their activities.

These problems led to the search for joint functioning mechanisms of state and business, since it was the interaction of the state and the private sector that were and continue to be the main economic entities in health care in more than 150 countries of the world [9, 10].

The relevance of public-private cooperation in the development of the OPPI infrastructure was confirmed by the fact that the PPP has a number of specific features and characteristics. The following can be named among them:

- * - legal registration of the partnership between the state and participants from the private sector by means of a special agreement, contract.

- Co-financing in certain shares or 100 percent financing by the private sector of PPP projects.

- Predominantly long-term contractual relations, PPP is focused on solving strategic tasks of development of state and communal property and provision of public services. Strategic partnership allows successfully use PPP even in non-profit or low-profit social sectors such as health care and education [3].

- Distribution of risks in projects between the state and business.

- Innovative methods of managing the sphere of production and providing public services. Within the framework of PPP projects, the private sector brings modern

organizational experience, knowledge, and new management technologies to the sphere of production and provision of public services.

Also, the main aspects of the PPP mechanism functioning and developing the infrastructure of the OPPI were determined, namely:

- organizational and legal aspect;
- financial and investment aspect;
- technical and organizational aspect.

The organizational and legal aspect as an institutional cover allows to form the infrastructure of the OPPI on the principles of PPP, to ensure its activities in the preparation and conclusion of a contract between public and private partners, to create a favourable environment for innovation. PPPs norms and legal provisions are "framework", the basis of the PPP mechanism, on which other elements can already be "cultivated" that contribute to normal, uninterrupted work in the implementation of partnership relations. The regulatory acts reflect procedures for settling discrepancies, measures to control pricing, customer service, operations and market structure. Currently, PPP development in Ukraine is based on

- Law of Ukraine "On Public-Private Partnership" Bulletin of the Verkhovna Rada of Ukraine (VPR), 2010, No. 40, Article 524. With changes made in accordance with Laws of the VPR N 5007-VI (5007-17) dated 21.06.2012, 16.10. .2012 [4];

- Law of Ukraine dated November 24, 2015 No. 817-VIII "On Amendments to Certain Laws of Ukraine on the Elimination of Regulatory Barriers for the Development of Public-Private Partnerships and Stimulation of Investments in Ukraine" [5];

- Law of Ukraine of 04/06/2017 No. 2002-VIII, effective from 05/06/2017, "On Amendments to Certain Legislative Acts of Ukraine on Improvement of Legislation on the Activities of Health Care Institutions" [6].

The financial and investment aspect of the PPP mechanism provides the correct balance of investments, which are carried out in different proportions, but with mandatory private financing and additional state participation in financing and under the condition that services are affordable for consumers. At the same time, the public partner assumes part of the costs for the reconstruction of the object of the agreement, its use and exploitation.

Funding sources can be divided into three groups:

- Own funds of partners, own capitals;
- Loan funds: bank loans, commercial loans, bond loans; loans from foreign and Ukrainian banks.
- Involved funds, which include:

- sponsorship funds - funds from strategic investors, state and regional funds and development banks;

- budget financing (target budget credits (loans), direct subsidies, grants, donations).

Technical and organizational aspect. It includes technical analysis to determine the cost of the service, marketing and sociological research, financial analysis and modeling to determine the cost recovery tariff (balancing of service levels and tariff levels), drawing up business plan options, as well as evaluating the effectiveness of the PPP project.

The implementation of PPP mechanisms allows to solve two tasks: first, to reduce the deficit of funding sources, the inflow of investments, and second, to improve the quality of services and the efficiency of health care management. Thus, PPP is a potential tool for developing medical infrastructure, attracting investments, increasing the quality of medical services to the population.

It should be noted that it is beneficial for the state to participate in the PPP, because of the following factors:

1. Expectation of high efficiency of such partnership. The state's decision to use PPP mechanisms in the provision of services is always preceded by analytical work designed to prove that these mechanisms will provide society with great efficiency by achieving of lower costs; higher level of services; risk reduction.

2. New sources of investment. PPP allows the state to gain access to alternative sources of capital, making it possible to implement important and urgent projects that would otherwise be impossible.

3. Reliability of results. The reliability of obtaining a positive result is ensured due to the financial interest of the private partner in the implementation of the project in order to minimize the level of costs and fix the prices for services before the project's start. This protects the investor and society from the risks of underestimating or overestimating the cost of services.

4. Innovations. The unique combination of public and private sector capabilities that emerges in PPP and the competitive contracting process determine the high potential of innovative approaches to the creation and management of public infrastructure within the framework of PPP.

It is also beneficial for business to participate in PPP because

1. A private company receives long-term ownership and use, state assets, thus ensuring stable profit in the long term.

2. When making investments, the entrepreneur receives guarantees of their return, since the state as his partner agrees to ensure a mutually acceptable level of profitability.

3. Possessing economic freedom, a private company can increase the overall profitability of the business during the term of the contract with the state due to increased labor productivity and innovations.

Having proved the relevance of private cooperation with the state in the development of OPPIs that provide cardiac care, we developed a model of key factors for achieving success in the development of the infrastructure of medical establishments that work on PPP principles (Fig. 1)

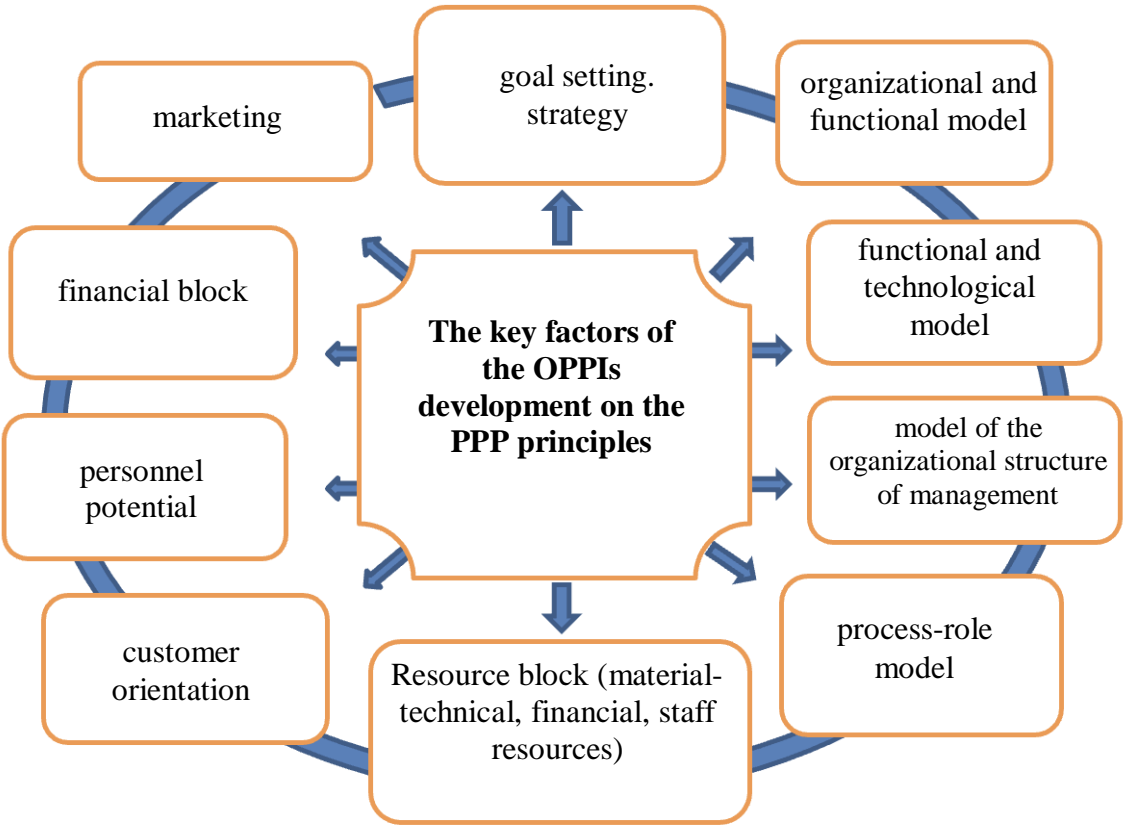


Fig. 1. Conceptual model of the key factors of the development of the infrastructure of OPPIs based on PPP principles.

The key factors in the activity of the OPPIs under study answer the following questions:

- Goal setting - answers the question why the OPPI deals with these services, why it hopes to be competitive, what goals and strategy must be implemented for this;

- Organizational and functional model - answers the question of who and what does in the OPPI and who is responsible for what;
- The functional-technological model answers the question of what and how it is implemented in the OPPI;
- Management organization model - represents the composition, interaction, distribution of work by divisions and their management;
- Process-role model - answers the questions of who-what-how-to whom;
- Resource block - answers the question of how many and what kind of resources are needed;
- Customer orientation of the model - answers the question of what kind of relations the model has with customers and business partners and objects of the external environment.
- Personnel potential –is responsible for creating conditions, possibly motivation, for qualitative work of personnel;
- Financial block - determines investments, cost structure, profit streams:
- Marketing - is responsible for meeting the needs of buyers of medical services and generating profit for the OPPI.

Conclusions. Public-private partnership is an engine for achieving success in the development of OPPIs that provide cardiology care. There is a necessary legal framework for the implementation of PPP projects in health care sector.

The conceptual model of the key factors in the development of the infrastructure of OPPIs, working on the principles of PPP, described in the article, is a promising direction in their development.

Prospects for further research are to use the results obtained to substantiate conceptual approaches to improving the organization of medical care for patients with diseases of the circulatory system at the regional level.

References

1. Ivanyuk A., Kanyura O. Problemy ta shlyakhy udoskonalennya orhanyzatsyy kardiologichnoyi dopomohy sil's'komu naseleunnyu na mnenye likariv -kardiologiv. /A. Ivanyuk, O. Kanyura // Ukrayins'kyi naukovy medychnyy molodizhnyy zhurnal, 2020, vyp. 3 (117), s.17-22.

2. Derhachova V. V. Derzhavno-chastnoe partnerstvo yak institutsional'niy instrument investuvannya ekonomiky krayiny [Elektronnyy resurs] / V. V. Derhachova, K. O. Kuznyetsova // Biznes Inform. - 2018. - № 1. - S. 111-116.
3. Lyniv I. V. Vykorystannya derzhavno-pryvatnoho partnerstva dlya rozvytku infrastruktury / I. V. Lyniv // SVIT. 2016. T. 7. № 2. S. 54-60.
4. Varnavskyy V. H. Derzhavno-pryvatne partnerstvo v okhoroni zdorov'ya: mizhnarodnyy dosvid / V. H. Varnavskyy // Upravlinnya okhoronoyu zdorov'ya. - 2012. - №1. - S. 9 - 16.
5. Zakon Ukrainy vid 01.07.2010 № 2404 VI «Pro derzhavno-chastnoe partnerstvo» [Elektronnyy resurs] Rezhym dostupu: [https:// zakon. rada.gov.ua/laws/show/2404-17#Text](https://zakon.rada.gov.ua/laws/show/2404-17#Text)
6. Zakon Ukrainy vid 24.11.2015 № 817-VIII «Pro vnesennya zmin do deyakyh Zakoniv Ukrainy odnosytel'no usunennya rehulyatornykh bar'yeriv dlya rozvytku derzhavno-pryvatnoho partnerstva ta stymulyuvannya investitsiy v Ukraini» [Elektronnyy resurs] Rezhym dostupu: <https:// zakon. rada. gov.ua/ laws / show / 817-19. # Text>
7. Zakon Ukrainy vid 06.04.2017 № 2002 VIII «Pro vnesennya zmin do deyakyh zakonodavchih aktiv Ukrainy odnosytel'no udoskonalennya zakonodavstva po voprosam zakladiv okhorony zdorov'ya». [Elektronnyy resurs] Rezhym dostupu: <https://zakon.rada.gov.ua/laws/show/2002-19#Text>.
8. Ivanyuk A., Kanyura O. Problemy orhanyzatsyy ambulatorno – poliklinichnoyi kardiologichnoyi dopomohy u Kyyivs'kiy oblasti (za danimi sotsiologichnoho opytuvannya patsiyentiv). / A. Ivanyuk, O. Kanyura // Visnyk mors'koyi medytsyny. 2020; 3 (88): S.16-22.
9. Varnavskyy V. H. Derzhavno-pryvatne partnerstvo v okhoroni zdorov'ya: mizhnarodnyy dosvid / V. H. Varnavskyy // Upravlinnya okhoronoyu zdorov'ya. - 2012. - №1. - S. 9 - 16.
10. Rodnyans'kyy D. V. Derzhavno-pryvatne partnerstvo v sferi okhorony zdorov'ya: rehional'nyy analiz / D. V. Rodnyans'kyy // Mizhnarodnyy zhurnal prykladnykh nauk i tekhnolohiy «Integral» 2019. №1 S. 133-139.