

# Health industry modernization: strategic priorities of development of the partnership of state and business (regional aspect)

Gukas N. Ter-Akopov<sup>1,\*</sup>, and Natalya N. Kosinova<sup>2</sup>

<sup>1</sup>Pyatigorsk Medical and Pharmaceutical Institute - a branch of Volgograd Medical University, Pyatigorsk, Russia

<sup>2</sup>Volgograd medical University, Volgograd, Russia

**Abstract.** Recently, in Russian medicine there have been many problems accumulated over the past decades. One of the ways to solve the accumulated problems in the field of health care can be considered the introduction of such an institution of interaction between the government and businesses as public-private partnership (hereinafter – PPP). The article analyzes PPP in health care as a comprehensive study of positive and negative factors that can affect the effectiveness of the development of PPP Institute in the modernization of health care. According to the results of the analysis, the most important strategic priorities of PPP Institute development in the field of health care are identified, which imply the need to create favorable legal, organizational and institutional conditions for effective management of PPP projects in the modernization of health care in order to improve the availability and quality of medical services.

## 1 Introduction

Recently, the Russian scientific literature has been raising the question of the appropriateness of incorporating the concept of PPP in certain sectors of the economy. The use of PPP in Russian healthcare also calls for a deep understanding of the matter. In particular, at the present stage, the development of the problem of attracting managerial, financial and other resources of commercial structures in the healthcare sector through PPP also depends on the generalization and analysis of existing regional experience.

The issues of determining the effectiveness of the application of the principles of PPP in the healthcare industry and the place of partnership in meeting social needs need further theoretical consideration. The applied aspects of the implementation of specific organizational and economic forms of public-private partnerships are currently insufficiently developed.

The main goal of PPP in the healthcare industry in accordance with the provisions of the state program of the Russian Federation “Development of healthcare until 2020” is “the development of the interaction of public and private healthcare systems. It is necessary to develop the introduction of private medical institutions into the compulsory medical insurance system, the use of concession agreements, as well as the involvement of management companies in order to manage certain types of medical institutions according to various analytical criteria” [1].

The aim of the study is to justify partnership forms of interaction between the state and businesses in the healthcare industry and to identify strategic priorities for

improving PPP mechanisms in the process of healthcare modernization.

To achieve the goal of the study, methods of strategic and integrated economic analysis were used.

The systematic approach was used when considering the influence of factors of the internal and external environment on the development of the PPP institution in healthcare, in the analysis of legal acts of PPP in healthcare, organizational forms, models, individual PPP tools in the practice of the Russian regions.

## 2 Results and discussion

### 2.1 Specifics of the PPP in the healthcare industry

At present, Russian healthcare is notable for its unfavorable medical and demographic situation, insufficient funding, low efficiency of resource use, low level of implementation of the state guarantee program for the provision of medical care and, as a consequence, a deterioration in its quality and accessibility, and an unbalanced structure of medical care for the population.

In healthcare, public-private partnerships make it possible to reduce the burden on the state budget and to redirect scarce financial resources to other costly items. At the same time, the private investor assumes obligations for modernization, reconstruction, construction and receives some payment for the services provided. As a result, mutually beneficial cooperation is formed, which allows for the implementation of innovative development in the healthcare sector [2].

\* Corresponding author: [Nnm\\_05@mail.ru](mailto:Nnm_05@mail.ru)

The most important task of PPP in the healthcare sector is to intensify the investment process, which requires serious support and monitoring from the federal and regional authorities, including:

1. Financial incentives for investments from budgets of both the federal and regional levels in the healthcare infrastructure, providing guarantees to private investors who wish to take part in healthcare projects in investment projects.

2. Intensification of the negotiation process with potential foreign investors and an increase in the share of foreign investment.

3. Adoption of the state program for the formation of public-state investment fund [3].

Currently, the main forms of PPP in Russian healthcare are:

- state-assisted creation of new private medical centers;
- agreements on the transfer to the investor of the geographically advantageous buildings of medical organizations with the condition for the construction of new buildings for such institutions in another place;
- modernization of buildings to move medical organizations into them from other buildings that are attractive for private projects;
- transformation of state medical organizations into joint stock companies with state capital and the possible further creation of a joint public-private enterprise with the participation of private capital elements [4].

In addition, private companies can set up blood bank systems, dialysis centers, ambulance services near major highways to provide emergency medical assistance in road accidents, and so on.

Cooperation between the state and private business in healthcare can also be expressed in the direct participation of private medical institutions in the provision of free medical services for the population, for example, their connection to the implementation of the territorial compulsory medical insurance program; the provision of free medical services to the population under the state order and much more.

In our opinion, public-private partnership in the field of healthcare is a special type of partnership such as long-term cooperation between executive authorities, healthcare organizations, private business and civil society institutions, aimed at implementing publicly significant projects and programs for protecting public health based on mutually beneficial distribution resources, responsibility, risks and results of joint activities in healthcare. Current economic conditions can be used to form the competences of both medical personnel and managerial staff capable of solving complex problems in the development and implementation of PPP projects. The potential of PPPs in healthcare is significant: the interaction of economically interested partners, additional sources of investment, the expansion of innovative opportunities, etc.

## 2.2 Current regional PPP practices in Russian healthcare

The experience of Russian regions indicates that PPP in healthcare has a tendency to develop and increase. In particular, according to the National PPP Center, in 2015, 23 PPP projects in the healthcare sector were implemented in Russia, in 2016, there were already 76 projects, and in 2017, 60 investment PPP projects in 29 regions of the Russian Federation were at various stages of implementation [5].

Regions leading in the implementation of PPP in healthcare are: the Republic of Kabardino-Balkaria, North Ossetia-Alania and Tatarstan, Belgorod, Vologda, Kaluga, Leningrad, Lipetsk, Nizhny Novgorod, Novosibirsk, Ryazan, Samara, Sverdlovsk and Rostov regions, as well as the Stavropol Territory [ 6].

The most common form of implementing PPP projects in the healthcare industry is a concession agreement, however, an even bigger volume of investments consists of lease agreements with investment obligations. This situation is due to the fact that the lease seems to be simpler (from the point of view of launch and preparation costs) for investors as a form of agreement with the public side. Such agreements are actively applied in relation to the reconstruction of healthcare facilities, the restoration of cultural heritage sites and tourism [7].

Table 1 shows the distribution of projects and private investments in the PPP projects of the social sphere according by form of implementation.

**Table 1.** Distribution of projects and private investments in concluded ppp projects of the social sphere by realization form in 2017.

PPP project form	Number	Volume of the private investments, thousand Rub.
Concession Agreement (115-FZ)	145	32 786 409
Lease (reimbursable use) agreement with investment obligations	144	122 150 036
PPP / MPSP (regional law)	59	52 847 803
Life cycle contract or long-term state or municipal contract with an investment component (44-FZ)	13	459 440
Offset procurement (44-FZ, Art. 111.4)	1	3 000 000
Other forms	6	9 128 041
<b>TOTAL</b>	<b>368</b>	<b>220 381 729</b>
<i>Note.</i> Compiled by authors using [8].		

The number of PPP projects in the social sphere continues to grow despite the market conditions there were 368 projects in 2017 (290 at the end of 2016).

In the healthcare industry, most PPP projects are being implemented. Fewer projects are being implemented in the field of tourism, culture and restoration of cultural heritage sites. The distribution by industry and the volume of private investment in

ongoing PPP projects in the social sphere is presented in table 2.

**Table 2.** Distribution of projects and private investments in implemented projects of ppp of the social sphere by industry in 2017.

Industry of the social sphere	Number	Volume of the private investments, thousand Rub.
Healthcare and spa treatment	110	73 331 642
Culture, leisure, tourism and restoration of cultural heritage	99	43 176 675
Education	73	33 811 272
Physical culture and sport	59	12 546 435
Social services	54	57 515 706
<i>Note.</i> Compiled by authors using [9].		

The leader among the regions of the Russian Federation in which the form of concession agreement is effectively used is the Republic of Tatarstan. Concession agreements on the creation and operation of outpatient hemodialysis centers were concluded with the Clinic for Modern Medicine HD LLC in Kazan, Naberezhnye Chelny, Nizhnekamsk and Bugulma, which made it possible to ensure the availability of this type of assistance for the population of the republic. In addition, the outpatient hemodialysis center in Kazan was recognized as the best social infrastructure project in Russia as part of the National Infrastructure Prize [10].

As examples of PPP, besides concession agreements, experts include a few joint ventures in regions with solvent demand, for example, a network of clinics "Medsi" and the Moscow City Hall. According to this scheme, the state invests building and land in the project, and the private investor, receiving income from paid services, carries out major repairs, buys equipment and manages the institution.

The cooperation of private dialysis centers with regional CHI funds is gaining ground. Regions that do not have their own funds for the construction of dialysis centers "order" it to commercial structures. After the center is built, the region buys from the private builder the right to dialysis in its center, and the rates can be very different. For citizens, dialysis is included in the compulsory medical insurance, so it is not beneficial for the region to refuse the services of the center.

Public health facilities often attract private businesses to provide outsourced services. The most successful and well-known example of outsourcing in healthcare is the activity of the Novoskor company, which provides ambulances for outsourcing to health care facilities in Perm, Yekaterinburg, Kirov and the Moscow Region. The project began in 2008 in Perm. The ambulance fleet in Russia is about 15,000 cars, the wear and tear of which is 60–80%, with the need to replace 10,000 cars. The company "Novoskor", providing medical institutions with their own cars, thereby allows to save on their purchase and maintenance.

When implementing this project, the total savings of budget funds of the Perm Territory for the period 2008-2013 amounted to 200 million rubles [11].

The practice of transferring other types of services to outsourcing by healthcare institutions, including: technical and technological maintenance of equipment of medical institutions; clinical trials; garbage and anatomical waste removal; organization of checkpoints, protection of public order and security in the territory of medical institutions; maintenance of water supply, sewerage, technical support of food units, elevators, washing; providing institutions with ready meals, requires additional attention.

An effective direction for developing partnerships in the field of medicine seems to be interaction with private business in the field of educating the personnel for medical organizations. The educational center of high medical technologies in Kazan, opened in 2008, became the first educational center of PPP in the world. Regional authorities provided the building and administrative support. The business provided expertise, including project management experience, and financed operating expenses. The Center provides advanced training and retraining of doctors, nurses and nurses, administrators of medical institutions in PPP.

The analysis of the current regional practices of PPP in Russian healthcare indicates such trends as the interest of both private investors and the state in the implementation of PPP projects; application in the field of healthcare of all PPP models available today in Russia (concession agreement, partnership on the basis of regional law, etc.) to fulfill the tasks; the need to expand the models (mechanisms) of PPPs and their normative consolidation at the federal and regional levels to ensure the possibility of wider application.

### 2.3 Strategic priorities for the development of public-private partnership in the healthcare sector

If we apply a systematic approach to the formation of the institutional healthcare system, the effectiveness of PPPs in healthcare can increase. Such an approach to the healthcare management structure includes the following strategic priorities:

- Formation of the federal and regional regulatory framework for the implementation and use of the PPP phenomenon in healthcare in the framework of lawmaking.
- Training of state employees in the specialty "manager of the implementation of public-private projects in healthcare"; organizational activities to improve contractual relations through the use of models such as service contracts, management contracts, construction and equipment contracts, hybrid contracts, leases, concession agreements; the formation of a coordinating body in healthcare for public-private partnerships [12].

The duties of the coordination body must include:

- interaction with citizens and business to disseminate information about PPPs and the possibilities of such cooperation in order to attract investors;
- assessment and analysis of all potential projects and financial indicators, taking into account their social significance, in order to guarantee consumers the provision of equal access to medical services while maintaining the price level;
- risk analysis of PPP projects and their differentiation. In particular, operational risk is better managed by a private partner, and government representatives can control and reduce the risks of changes in the regional regulatory framework. The state can also act as a guarantor of foreign economic relations;
- comprehensive assessment and monitoring of PPP projects upon their completion.

- Government activities aimed to financially incentivize the PPP entities, namely:
  - application of the possibilities of tax regulation, namely, reforming the principles of taxation of profit of healthcare institutions invested at the expense of their income in the development of medical services;
  - increasing the use of VHI opportunities in order to attract additional funds in the implementation of PPP projects in the healthcare industry.

### 3 Conclusion

1. The strategic potential of PPPs in healthcare is significant, including the interaction of economically interested partners, additional sources of investment, the expansion of innovative opportunities.

Today, the Russian Federation's healthcare uses fixed assets in the amount of 2.0–2.2 trillion rubles, while the degree of depreciation of funds is 40–45%. To solve the strategic tasks of modernizing the industry, investments worth about 1 trillion rubles are needed. It is possible to solve this problem using the mechanism of public-private partnership.

2. The analysis of modern regional practice of public-private partnerships in Russian healthcare shows a tendency to develop with the use of a minimum number of partnership forms: concessions; outsourcing of certain services; participation of commercial clinics in the provision of free medical services for compulsory medical insurance.

3. The strategic direction of the development of the PPP institution in healthcare is the adaptation of successful foreign and domestic PPP experience to the Russian reality, which suggests the need to create favorable organizational, financial and legal conditions.

The healthcare industry requires not just modernization, but the creation of new innovative digital healthcare systems based on new technologies and management methods that meet modern standards. To promote innovative developments in medical institutions of the Russian regions on the principles of public-private partnership, the Digital Health Consortium was established. Large corporations that are part of the consortium will play the role of conductors of innovative developments in regional medical organizations.

Together with private business, they will work on transforming medical institutions in specific regions. This will help investors to return their investments, and the state - to save money. In this case, public-private partnerships will become an effective tool for modernizing the healthcare system.

The complex of the above measures will make it possible to increase the efficiency of healthcare management, eliminate the "investment hunger", and solve the accumulated problems by developing mechanisms of partnership between businesses and the government.

### References

- [1] S.A. Krayevoy, Perspektivy razvitiya gosudarstvenno-chastnogo sektora v zdravookhraneni, Prospects for the development of public-private sector in health care, Portal informatsionnoy podderzhki meditsinskikh rukovoditeley, Portal open support for medical experts (2017) [Electronic resource]. Available at:<https://www.zdrav.ru>.
- [2] R.A. Zherdev, Gosudarstvenno-chastnoye partnerstvo kak drayver razvitiya otechestvennogo zdravookhraneniya, Public-private partnership as a driver for the development of domestic health, Rossiyskoye predprinimatel'stvo, Russian Entrepreneurship, 18, 3125-3128 (2015).
- [3] P.M. Pridachuk, M.S. Tolstel, S.P. Sazonov, N.N. Kosinova, Financing of company: modelling the process of making decisions under the conditions of globalization, 17th International Scientific Conference Proceedings (Part V.): GLOBALIZATION AND ITS SOCIO-ECONOMIC CONSEQUENCES, 2104-2111(2017).
- [4] Ye.O. Tappaskhanova, Z.A. Mustafayeva, Gosudarstvenno-chastnoye partnerstvo v zdravookhraneni, Public-Private Partnership in Health, Rossiyskoye predprinimatel'stvo, Russian Entrepreneurship, 13, 211, 112-118 (2016).
- [5] Natsional'nyy tsentr GCHP, National Center for PPP (2017) [Electronic resource]. Available at:<http://pppcenter.ru/>.
- [6] F.F. Rau, Gosudarstvenno-chastnoye partnerstvo kak mekhanizm investirovaniya resursov v razvitiye infrastruktury zdravookhraneniya region, Public-private partnership as a mechanism for investing resources in the development of the health infrastructure of the region, Rossiyskaya nauka v sovremennom yavlyayas' mire: sbornik statey, Russian science in the modern world: a collection of articles, Moscow: Research Center "Actuality. RF", 122-123(2017).
- [7] N.N. Kosinova, Partnerstvo vlasti i biznesa v razvitiy sfery infrastruktury regiona: problemy i resheniya, Partnership of government and business in the development of the infrastructure of the region: problems and solutions, Vestnik VolGU, seriya 3. Ekonomika, Ekologiya, Bulletin of VolSU, series 3. Economics, 19, 3, 87-98 (2017).

- [8] Natsional'nyy tsentr GCHP, National Center for PPP(2017) [Electronic resource]. Available at:<http://pppcenter.ru/>.
- [9] Natsional'nyy tsentr GCHP, National Center for PPP(2017) [Electronic resource]. Available at:<http://pppcenter.ru/>.
- [10] V.L. Adzhienko, N.N. Kosinova, Strategicheskiy analiz instituta gosudarstvenno-chastnogo partnerstva v sfere zdravookhraneniya, Strategic Analysis of the Institute of Public-Private Partnership in the Field of Health, Farmatsiya i farmakologiya, Pharmacy and Pharmacology, 5, 4, 380-400 (2017).
- [11] K.Yu. Vorob'ev, Outsorsing: ponyatiye, osobennosti, preimushchestva, Outsourcing: concept, features, advantages, Vestnik Yaroslavskogo gosudarstvennogo universiteta im. P. G. Demidova, Seriya: prodvizhenii Gumanitarnyye vozdeystvuyut nauki, Bulletin of Yaroslavl State University. P. G. Demidov, Series: Promoting Humanitarian Impact Science, 4, 193-196 (2013).
- [12] N. Kosinova, M. Tolstel, A. Chekealkina, Comprehensive Evaluation of Investment Potential, The Case of the Southern Federal District, Asian Social Science, 23, 231-243 (December 2014).