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PAPER

Innovation in Russian Health Care System Toward the Effective Mechanism in Resource Allocation

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Abstract Recently, the economic aspects of health care have gained greater attention. This is due primarily to the fact that health care costs in the countries with developed market economies have continued an upward trend: on average in OECD countries, they made 9.8% in 2010. Herewith, a situation when the growth rate of GDP in some countries (the OECD average in the 2000s, average annual growth in real GDP per capita was 2.2%, and health care - 4.2%) becomes a cause of a concern in the society. In Russia, the solution to the problems of health financing has now become one of the most important conditions for ensuring the health of its citizens, especially as the current state of the health system in the country is considered by many experts as critical. In such conditions, first primary is given to a search for the most effective mechanisms, on the one hand, of mobilization, and on the other – of the distribution of resources on public health. The aim of this paper is to examine these aspects, highlighting possible prerequisites of choice of one or another alternative of health care financing. The paper uses administrative data to gain into the characteristics of a specific distributive mechanism.

Keywords Health care systems - Russian health care reforms - Distributive mechanism - Resource allocation

JEL Classification H00 - H51 - H61 - I10 - I11 - P21

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Health Care Systems: possible options

Presence in one country or another of appropriate health care system depends on many circumstances and parameters, representing basic features of health system as well as its main economic characteristics. All depends on what is the basis of classifying a health system: whether it is a socio-political structure of society, the nature of relationships in health care, or even the legal characteristics of universal physician-patient relationship. At the same time, it is widely recognized, that there are certain limitations to the level of universal health care. Most countries fully extend the accessibility, but reduce the number of medical services included in the basic range of services, available to all. In this way the countries make health care affordable and even "free" (conditionally free since someone still pays for it). In this case we are talking about that which did not pay directly to the person who now consume medical services. Hence, there is an objective need for a balance between the costs and availability.

What's being done in different countries in order to solve this problem, namely, on the one hand to keep costs within reasonable limits, and on the other – to ensure universal access? To do this in the world used a variety of strategies used by different health systems, and in general, all these systems exist in the so-called universal budget.

The British system (**public,** or Beveridge **system**) is a system that was taken as a sample by the Scandinavian countries, Denmark (1973), as well as southern European countries: Portugal (1979), Italy (1980), Greece (1983), Spain (1986)[1]. A characteristic feature of this system is significant (or even exclusive) role of the state, which is the main purchaser and supplier of health care, providing satisfaction of most of the public health needs. Health financing is mainly provided from the state budget through taxes on enterprises, and the population. Except for a small range of health services, the population receives a free medical care.

The **second model** ***(if done a certain scale between the decision to the state and the decision by the patient)*** is a German model (Bismarck system), which is defined as social insurance system or a regulated health insurance. In this case we are talking about insurance system: money to doctors and hospitals is paid by insurance company. These are not directly a state-owned companies, mostly private, but they are state-controlled. They are organized on a sectorial basis, that is, there is a fund for transport, for agricultural workers, for the miners. This model of health care based on the principles of a mixed economy, combining the health care market with a developed system of state regulation and social security, access to health care for all segments of the population.

The **third model**, which can be distinguished, is a ***system that in the first place tries to solve the problem of the costs*** by leaving the state control over prices and ***passing the decision to a final consumer***. Accordingly, the costs also passed on to the consumer. That part of the needs that are not met by the market (the poor, pensioners, unemployed) is assumed by the state through the development and financing of public health care programs. When the consumer pays more, he has the right to make decisions himself, therefore he will make decisions based on his own interests. One of these systems is a French one, although the most striking example is a system in the United States, where it is actually all private.

According to experts, ***health care system in the Soviet Union*** was, if not the most productive, one of the cheapest and most profitable for the state, the largest in the world in the number of doctors and hospital beds, and prefigured the national Health Service in the socialist state.

[1] This classification of models is provided by the health experts of the World Health Organization (S. Hakansson, B. Majnoni, D'Intignano, G.H. Mooney, J.L. Roberts, G.L. Stoddart, K.S. Johansen, H. Zollner) as the primary types of health systems.

Health care system laid by the first Soviet People's Commissar Nikolai Semashko (1874-1949) was based on a few ideas: common principles of organization and centralization of the health care system; equal access to health care for all citizens; priority to motherhood and childhood; unity of prevention and treatment, elimination of the social bases of disease; involving the public in the case of health care. All these ideas were developed by many leading physicians, both Russian and the world since the end of the XIX century, but the basis for public policy, they were first laid in Soviet Russia. In some details, the system created by Semashko preserved in Russia to this day, however, it is not fully conform to its original design.

Compulsory health insurance system of Bismarck is based on contributions of employees and employers, while William Beveridge system and Nikolai Semashko system are based on budgetary financing of health, although significantly differ in their internal structure. At the heart of both the compulsory health insurance and budget financing there are two principles that became the fundamentals of the modern welfare state: equity and solidarity. Under the equity in this context is understood the ability to access to health care resources, and appropriate allocation of the burden of financing the health system between different socio-economic groups (e.g., World Health Report 2000). The basis of this comprehension of equity is the category of demand, which implies that a person really needs help for medical reasons. It may exist in humans, but not to be identified and realized. So, the access essentially means the possibility of a citizen to obtain the desired set of health services according to need.

Thereby, we are talking about a certain ideal, the realization of which in different countries is managed to get closer to varying degrees. Nevertheless, almost all countries still do not know exactly how to solve the problem of rising health care costs, and, in a certain sense, the more effort is made to health development, the farther it seems achieving the ideal.

Main streams in Russian's health care financing reform

Protecting and promoting the health of the population is represent a multi-faceted system of public, social, socio-economic, and health care actions, which, on the one hand, are based on the preventive focus, unity of medical science and practice, the widespread use of scientific and technical progress. On the other hand, the most complete and effective combination of the needs of the population for health care, drug supply and sanitary-epidemiological service with economic resources to satisfy it can become possible due to the development and implementation of evidence-based system of the activities carried out by state and local governments.

Real health-related spending in the industrialized world has grown considerably faster than the real gross domestic product during the last decades, which is associated with a number of interrelated factors, from general inflation to different diseases structure and more intensive use of health care services (OECD, 2009). In addition to these "universal" problems, Russian health system faces serious difficulties which could be identified as follows (Tragakes&Lessof, 2003; Pidde, 2010):

- Lack of resource and financial support.
- Low effectiveness of the health care institutions.
- Inadequate quality of medical care in the presence of sufficient supply of the population with medical personnel and hospital beds.
- Inadequately low wages of health employees.

According to most researchers and practitioners, the current state of the Russian health care system can be rated as critical. Causes of the crisis are multi-layered. In part, this situation

was provoked by the transition of Russian economy to the principles of the market economy in terms of price liberalization. High inflation level and the budget deficit have aggravated the problem of survival of public health, supported by state funding. In these circumstances, the rational strategy of not only development, but also the functioning of health care involves advancing the quality parameters change from quantitative. In the other direction, funds invested in this area, do not give proper results. The way to overcome such situation scholars see the need for a comprehensive reform of the Russian health care. This reform should include a system of measures to modernize and diversify the economy of health in general and ensuring the efficiency and effectiveness of each agency in particular.

Health care reform in the Russian Federation began with the adoption in 1991 of the law on health insurance and it happened when the Soviet Union still remained. Thus, we can say that Russia was the first of the Soviet republics that began to reform health care (Tab. 1).

Table 1 The main steps of the Russian health care reforming process

Year	Legislative Act	Main Contents
1991		Abolished the Ministry of Health of the USSR. Acted the Ministry of Health of the Russian Federation
	The Law of the Russian Federation "On Health Insurance in the Russian Federation" (from 28.06.1991 №1499-1)	- planned to create a market mechanism of interaction between the subjects of health insurance with elements of competition. - assumed that health care providers and insurance companies will be economically interested in improving the quality of care and the effective use of funds
1992	***Order of the Ministry of Health*** "On a phased transition to the organization of primary health care on the basis of a general practitioner (family doctor) " (from 26.08.1992 №237)	Adopted the concept of transition to a single responsible physician, which has to become a general practitioner (family doctor)
1993	***Federal Law*** "Fundamentals of Russian legislation on health care" (from 22.07.1993 №5487-1)	Establishing the legal, organizational and economic principles in the field of public health protection
	Resolution of the Government "Regulations on Medical Insurance Entities implementing mandatory health insurance" (from 11.10.1993 №1018)	- aimed at ensuring the constitutional rights of citizens to receive free medical care - supposed to create a fundamentally new model of health care financing via a specially organized structure of the state off-budget funds
1996	***Federal Target Program*** "Family medicine" (developed by the College of Health Ministry)	The program was designed for 1997-2005 years and included three phases: - creation of a system of professional training, regulatory, logistical and organizational framework; - introduction of general medical practice in the outpatient chain of regions in accordance with target programs in health; - formation of a system of general medical practice throughout the Russian Federation
1997	***Resolution of the Government*** "The concept of health development of medical science in the Russian Federation" (from 05.11.1997 №1387)	Among the priorities were identified: - provision of adequate financial resources to the volume of government guarantees; - development of the private sector in health; - increase people's interest in the preservation and strengthening of the health

Year	Legislative Act	Main Contents
1998	***Resolution of the Government*** "On approval of the state guarantees of free health care to the citizens of the Russian Federation" (from 11.09.1998 №1096)	Was made an attempt in order to balance the obligations of the state and resource ensuring for their enforcement
2000	***Order of the Government*** "The Concept of Health for 2001-2005" (from 31.08.2000 №1202-p)	The document notes the need for structural reforms in the health care system and change the functions of a number of medical services in order to strengthen measures to protect public health and disease prevention
2005	***The National Project*** "Health" (from 21.12.2005 №2)	The main purposes of the project (strengthen primary health care, strengthening of preventative health care, meeting the needs of the population in costly types of medical care) correspond to previously announced major areas of health care reform
2008	***Concept of Health care up to 2020*** (from 05.11.2008)	The key areas highlighted in the Concept were two: - promotion of healthy lifestyles and - the guaranteed provision of quality health care to the population

It took more than twenty years, and it should be noted the changes occurred:

1. Today in Russia operating budget-insurance model of financing health care.
2. Not without problems implementing a program of state guarantees of free health care for citizens, adopted as one of the mechanisms for the implementation of the constitutional rights of citizens to free health care under the Concept of Health, adopted in 1997.
3. Developed and enacted mechanisms to ensure the additional drug supply.
4. A large amount of work carried out in accordance with the implementation of the priority national project "Health".

However, in the financing and management of health care there are still many problems to be solved. In particular, they include:

- Dimensions of health funding from the budgets of all levels and at the expense of the compulsory health insurance does not provide the population with free medical services;
- Poorly developed competition in the market of medical services;
- Unresolved disunity of activity of agencies responsible for public health;
- Inadequacy of logistical basis of medical institutions.

At the same time, available financial and material resources are used inefficiently, increasing disparities in the provision of health care services. Meanwhile, it is known that the system of financing health care organizations determines the scope and nature of health care services delivered, as well as the hierarchical structure of the entire country's health care, from primary care (health center, clinic, general practice), and federal institutions including clinics that provide high-tech medical care. In this regard, creation of a model of financial relations, adequate to the needs of the population and takes into account the characteristics and nature of the various medical organizations in the regions of Russia, becomes a challenge. Even more relevant it appears because a multichannel budget-insurance financing which is currently taking place, is likely does not meet the direction of development neither Russian nor a worldwide science and practice of formation of financial relations in the provision of health services to the population.

Issues of budget-insurance model of financing of health care organizations are widely discussed in the recent literature, offering a vast variety of options for reform of the model (Tab. 2). The material was evaluated in accordance to the classification context that allows to

identify the relevant issues and to interpret the results. Problem context approach which was used in this paper allows to classify the reviewed sources of literature, which can be derived deductively and inductively.

Nonetheless, these proposals tend to be fragmented, focusing on solving one part of the common problem (for example, reducing the burden of mortality from the leading causes to solve problems of legal regulation of relations in the health care system, to preventative medical practices, etc.). This causes the regions to develop and implement their own approaches to the modernization of regional health services.

Table 2 Main streams in the scientific literature dedicated to health care issues

The Main Streams	Authors
Emphasize the ***need of the introduction of an alternative approach of the organization***, including consolidation of efforts of government, business and the public	M. Fotaki, Resident expert TACIS; O. Chirkunov, V. Ivanov, A. L. Pidde
Consider a ***search of a balanced combination of the principles*** of the old and the new public management as an integral part of the reform	L. M. Roshal, President of the National Medical Chamber; D. Egorenkov; P. Marquez, E. Freed, R. Atun, K. Chalkidou, V. De Geyndt, S. Salakhutdinova, J. Anderson, S. Shishkin, I. Sheiman, N. Lebedeva[1]
Believes that the modernization of the Russian health care ***should be primarily aimed at increasing life expectancy***	U. M. Komarov, Academy of Medical Sciences
It is believed that successful implementation of reforms in the first place ***require legal changes in health care***, including giving greater clarity to the organization of the system of compulsory health insurance	A. Akopyan, U. M. Komarov, I. A. Togunov, V. N. Rybin, Y. A. Stepkina, A. L. Pidde
Emphasize a ***key importance of payment system*** of medical care	L. E. Isakova, V. Z. Kucherenko, V. N. Denisov, E. A. Finchenko, I. M. Sheiman, O. Chirkunov
The basis for the modernization of the Russian health care should be the changes in the provision of out-patient care, particularly in ***ensuring the quality and accessibility***	S. V. Shishkin, I. M. Sheyman, V. M. Chernyshev, L. E. Isakova, G. N. Tsarik, M. Fotaki, M. V. Zhukova, I. Nazarova, K. N. Borisov, V. A. Alekseev[2]
Growing inequality of socio-economic development across the regions result in significant ***differences in access and quality of health care***	A. N. Borisov, A. E. Chirikova, L. S. Shilova, A. P. Arhipov, S. V. Shishkin, V. I. Starodubov, U. M. Komarov, R. A. Halfin, I. M. Son, K. A. Chernikova, E. G. Potapchik, T. V. Kuznetsova, V. V. Kookueva
See ***universal coverage of health services*** as a protection of the population from financial problems	S. K. Mamedova, A. A. Zhadan, K. Kessler[3]
The ***introduction of a single-channel system of financing health care*** is a direction that is supported by almost all Russian researchers	V. I. Starodubov, I. M. Son, A. V. Jurin, V. M. Chernyshev, S. V. Shishkin, N. B. Kanatova, S. V. Selezneva, V. A. Chernez, T. N. Makarova, T. V. Kuznetsova, D. V. Piven, P. E Dudin, V. V. Kookueva, A. A. Kalininskaya

[2] Expert Group of the World Bank.
[3] Emeritus professor of higher education in Russia.
[4] Based on the World Health Organization (WHO) materials.

Despite such fragmentation of views on approaches to solving problems of the Russian health care system, the most topicality in this process of restructuring acquired an effective solution of the problem of resource allocation in order to improve the availability and quality of health care. This is also concern the issue of inconsistencies between the available sources of funding from the state and the implementation of guaranteed free medical assistance to the population, as well as the development of the insurance industry and the relevant regulatory framework.

Background of changes. Health care system from a position of goal achieving

For all its harmony, causing interest and many followers worldwide, health care system in the Soviet Union had certain negative sides. Being attached to a particular doctor and certain hospital, patients actually were deprived of choice, making it impossible a competition between medical facilities and, in turn, caused a lack of attention to the needs of patients. Main health care expenditures (around 80%) were invested in inpatient care (which was seen as a major weakness of the organizational model of the Soviet and then Russian medicine), despite the fact that the most widespread type of medical care is a pre-hospital care, where normally used to begin and end treatment of 80% of patients. Gradual reduction in outpatient clinics began in the early 1990s, and in the following years their number continued to decline (Tab. 3).

It is believed that one of the main problem of the Soviet public health care system was a persistent underfunding, which became more perceptible with the complexity of medicine and in rise in prices to it, whereupon, many modern therapies and medicines in the Soviet Union did not develop or were simply inaccessible for Soviet citizens.

As some authors point out (e.g., Nazarova, 2006), referring to official statistics[5], it appears to be difficult to determine an exact volume of financing of health care (as a percentage of GDP) in the USSR, primarily due to the incompatibility of data. Likewise, it should be taken into consideration the complexity of capturing all the financial flows. Furthermore, if the expected results and volumes (and value) of services required to achieve these results are not described, the amount of funding requested cannot be reliably determined. Nevertheless, it cannot be denied, that if in the 1960-1970-ies health care funding was quite satisfactory, making about 8-8.5% of GDP, then in the last years of the USSR it was reduced to 3-3.5%. The average salary of employees in health care, calculated relatively to the level of wages in all sectors of the economy, fell from 82% in 1965 to 70% in 1985, despite the fact that the average level of education of employees in this sector was one of the highest among all sectors[6].

Table 3 Dynamics of values of outpatient care

	1985	1989	1990	1992	1993	1994	1995	1996	1997	1998	1999
Number of medical institutions providing outpatient care (in thousands)											
All Dept.*	19,4	21,1	21,5	20,7	20,9	21,6	21,0	21,1	21,7	21,1	21,1
e.g., Ministry of Health system	17,1	-	18,9	19,0	19,0	18,8	18,8	18,6	18,2	18,0	17,8
Average number of visits per 1 inhabitant											
	11,1	10,0	9,5	9,0	9,2	9,2	9,1	9,1	9,1	9,1	9,3

Source: Goskomstat (State Committee on Statistics of Russian Federation).
*All Dept., i.e. including differentiated aid, such as departmental and sectoral medical care (for instance, for military forces, railway men etc.).

[5] Social development of the USSR. The statistical data base, Moscow: Finance and statistics, 1990.
[6] At 2.3 times higher than the average for all industries.

In scientific publications in recent years there are also common opinions on low priority of the Soviet health care as industry. It is assumed that this situation was a result of so-called residual funding, which means that health care and social services receive funds only after the priority sectors were provided with financing, which include defense, industrial development and other. Indeed, financial standards which served to determine health care expenditures (such as expenses for capital construction, maintenance of buildings and the purchase of other materials) were set at unrealistically low level (Davis, 1989), which has had an important consequence for strategic purposes[7]. However, the term "residual financing" in this case may be used in an inaccurate way, taking into consideration the fact that dynamics of the total public expenditures on health (inflation considering) suggests that public funding of the post-Soviet period had never reached the level of Soviet period. The same inaccuracy use concerns the assertion that the main weakness of the Soviet health care system was the neglect of the effectiveness as such.

The term "effectiveness" in the sense in which it is interpreted today, was absent. Rather, the effectiveness was replaced by the goal of the execution of a plan, where the percentage of its execution actually served to measure the performance. After 1945, the population in the USSR needed to be ensured in overall comprehensive health service, and the solution of this problem in conditions of deficit of hospital beds and doctors, was possible, first of all, due to the intensive capacity increase. That is, with the increasing of quantity, performance indicators tended to improved (there was an increase in fertility and decline in mortality). Subsequently, trend of increasing capacity is remained, that along with worsening economic situation was the cause of decline of health care performance.

Funds were allocated to medical facilities on the basis of their occupation, which actually caused the "distortions" of the interests of the medical facilities, compromising the quality of medical services. Specifically, this situation could be expressed as follows.

The main indicator of occupation in hospitals were patient days, and in outpatient clinics such indicator was outpatient visit. In turn, this contributed to the excess of medical staff and hospital beds. They used to "absorb" major part of health care budget, while the appropriate investment in improving of the effectiveness of health services was not made.

At the end of the year, each hospital reported the actual occupation of the beds in the past year, on the basis of which received funds for a next year. Ultimately, for the hospital was advantageous to use as many beds as possible, to occupy them as long as possible and spend herewith for the treatment of complex cases less effort. Thus, in the period from 1970 to 1985, the number of physicians has increased by 75%, and hospital beds – by 35%. The number of doctors increased from 1.5 doctors per 1,000 population in 1950 to 4.2 in 1991, the number of hospital beds increased from 5.6 to 13.1 per 1,000[8]. On the one hand, considering the immense territory of the state, the country was fairly evenly provided by physicians and hospital beds. At the same time, the quality and potential of medical care was far less uniform (see the example above with the geographical differentiation). Increasing of the number of health care facilities, personnel and medical services were in line with the extensive development strategy and supporting this strategy fiscal incentives.

As for the clinics, their funding depended on the number of outpatient visits, which encouraged physicians not to engage patients and refer them to the next level of medical care. Thereby, clinics are really treated with less than 50% of patients who applied to them (which

[7] For example, in the early 1980s in the USSR standard pharmaceutical expenditures per patient day was 90 cents.

[8] For comparison, in the United Kingdom, the number of physicians was 1.6 doctor in 1991; number of hospital beds - 5.4 beds per 1,000 population.

are then sent to the hospitals, where for the reasons mentioned above stayed for a long time, waiting for operations and medical examination). In the late 1980s, an average of one person had an average of 10 visits per year, the level of hospitalization was 20 admissions per 100 people, the average length of hospital stay was 19 days.

Consequently, the planning was based exclusively on the capacity of medical facilities, the funds were actually spent in vain and the quality of care suffered. Because of distorted interests of medical facilities, health care system was primarily a therapy-oriented, in which the principal place was occupied by hospitals, while the development of medical services was "unprofitable." Moreover, the fact that medical employees used to receive a fixed wage regardless of the progress made and the charge, did not contribute in improving health care. Since the responsibility of the Ministry of Health did not include the collection of statistical data on the costs of individual diseases, the actual cost of medical services, flows of funds outside the administrative units, the consumption levels of individual medical services and others, results of health care functioning were not announced.

Therefore, the main weaknesses of the Soviet health care system reflected, firstly, the weaknesses in the process of planning and budgeting; secondly, the existence of incentives for unsustainable build capacity ("quantitative incentives"). In third, the lack of competition between health care providers and, finally, the declines caused by the unsatisfactory performance of deficit economy. The increase of quality and effectiveness of diagnostic and medical service was missed. All these aspects of health care system remained at a relatively low level in compare to Western European countries.

Nevertheless, according to experts, the Soviet method of financing of health care can be considered as a relatively fair, because funding of health industry was almost entirely public, functioning through general taxation or taxes on profits of enterprises, whereby in the USSR was achieved the goal of universal protection of the population from impoverishment due to illness.

Chronology of the national reform: from New Economic Mechanism to present health care financing

Since the early 1970s there was a gradual decline in budgetary funding of health care. A significant number of hospitals required rebuilding, equipment was physically and obsolescence out of use. Low wages of health employees provoked a spread of shadow business, such as the illegal payment of medical services by patients, speculation of rare medicines etc. The crisis in health care system was aggravated by the overall crisis of the economy[9].

Funding of clinics was regulated by number of outpatient visits, and hospitals – by patient days. This led to the practice of increasing the number of visits by each patient in an outpatient care and to lengthen the period of treatment in hospitals. Medical facilities was characterized by the disproportionate development of the most asset-intensive and expensive medical technology. The existing order of funding did not contribute to the intensification and effectiveness of work of medical personnel.

All this, as well as the funding gap identified the need to reform the health care industry. By the beginning of reforms, the existing system has been criticized, and as a way out of the

[9] This was due to the fact that up to 30% of health care facilities by the end of the 1980s contained by enterprises, organizations, collective farms and state farms, which are due to the economic crisis of 1993-1994, almost stopped to provide funding for these purposes.

crisis proposed the decentralization, which could increase the responsibility for the health of the population. The Ministry of Health was seen as a monopoly, and among the measures were offered a de-monopolization of health care facilities. Along with the development of private medicine, it was decided to introduce health insurance (both compulsory and voluntary), which meant the launch of market mechanisms.

First and rather modest attempt (in 1982-1986) to reform health care were ***experiments to increase the intensity of use of hospital beds of medical facilities*** by improving the diagnostic and treatment process. They were based on the empowerment of the rights of supervisors of medical facilities to change both the staffing ratios and the standards of workload and its financial incentives. For this purpose in medical facilities were created relevant funds. Increasing of intensity of hospital beds was carried out by material incentives of personnel without changing of financial and economic mechanism, so these innovations cannot be regarded as a prototype of health care reform. Under the experimental conditions the unit of payment become not the actual, but normative presence of patient in the hospital: a patient cured in a shorter period brought savings, on the contrary, his presence on the bed longer than the normative time was supposed to pay out of the fund. Hospital stay decreased by 1.5 days, bed turnover increased by more than 5%. In this situation, the question whether to hospitalize a patient, was not the main, and often hospital beds were occupied by "easy patients" - those who can be cured in a given period.

Next (1987-1991) was made a second, more serious step - introduced a ***new economic mechanism*** (NHM)[10]. It was then that for the first time was clearly expressed the need to pay not for a detailed chain of medical facilities, but the final results of the them. Transition to economic methods of management involves changing the system of performance of health services primarily to the transition to the estimates by the end results (preservation and promotion of health, resource efficiency, social satisfaction, etc.). Requirements for the performance of health facilities and their departments are expressed as normative values of final outcomes.

The idea of the NHM was to use economic methods of management so that to enable health authorities to actively search for internal reserves and the most rationally expend funds. At the same time emphasized that the application of cost accounting principles in health care should be directed primarily to better meet the needs of the population for health care and only then for additional income, and ultimately strengthen the role of primary health care.

Funding at the territorial level under NHM performed according to the standard per inhabitant per year, and health care facilities received funds per unit of volume of activity: hospital - 1 patient treated, clinics - one attached to the resident, ambulance service - at 1 call, etc. The magnitude of norm of budget funding for the territories had to be determined differentiated, taking into account the needs of the population in medical care.

Clinics and hospitals were separated, and the holder of the basic funds under the new conditions was the outpatient service, which was paying for other medical facilities for inpatient treatment, consultation, ambulance and other types of medical care.

In Kemerovo region clinic[11] began to receive funds based on per capita and acted as buyers of medical services for the people assigned to them. The budget of clinics considered costs for diagnostic tests, hospitalization, outpatient and emergency care. In hospitals and clinics set up independent medical associations who owned their own

[10] New financing methods have been tried in St. Petersburg, Samara and Kemerovo regions.

[11] Located in the south of Western Siberia, has a population of 3.5 million people, a developed industrial region.

budget and were able to financially encourage their staff. To control the quality and methods of treatment have been established economic health standards designed to prevent cost savings by reducing the amount of necessary medical services. Salaries of medical personnel began to be affected by the labor participation rate, which takes into account the number of days of disability, delayed diagnosis, the amount of the vaccination, complications of disease, patients with claims and other indicators. The rate was used in order to compare the results of work within the team. Premium was also paid on the basis of the rate, although its calculation did not include the indicators of the quality of medical care.

Thus, the idea was to prevent the unnecessary hospitalizations. In such circumstances, clinic was interested in providing qualitative medical care to the maximum extent on their own. Primary health care facilities has obtained the opportunity to keep any saved funds. It was assumed that there should be a change of the structure of medical facilities with a primary development of pre-hospital forms of activity, as well as reduce of unnecessary referrals to specialists.

As the load on primary health care increased, the structure of specialized medical care changed. Departments of general surgery, children's and traumatological departments reduced the number of beds, and narrow-profiled departments, particularly cancer department - increased. In Samara region as a result of reforms, average length of hospitalization decreased by 7% and bed capacity - 5,500 beds.

Savings resulting in such cases were directed or for the creation of information systems and training, or for the purchase of new diagnostic equipment and personnel support.

Nevertheless, the procedure of financing of medical facilities wore quite controversial character: in new conditions funding of hospitals was practiced on the basis of cost per patient day and the average duration of hospital stay, calculated for different profiles of patients. Wherein, the cost of patient day was taken into account empirically, on the basis of available, but not required resources. At the same clinics have got hard a rigid motive not to refer patients to the hospitals that could cause a risk of the lack of medical care. Thus, by "appropriating" the financial resources from the hospitals, clinics shared them within ourselves, and not the fact that the distribution contributed to improve the quality of medical services. There was a need to move to ***fundholding*** not by clinics, ***but general practitioners (family doctors)***, which was considered as one of the main objectives of the NHM in relation to the priority development of primary health care.

The choice of general practitioner had to become a real guarantee of quality medical service for a patient, and in case of dissatisfaction, he has the opportunity to move to another practitioner along with the insurance coverage. As Chirkunov (2011) points out, the problem in this situation is that a fund holder is primarily interested not in those patients which are constantly provided with his service, but the patients attached to him, those who never sought a medical care as they are healthy. Evidently, the consequences of the introduction of a tool such as "fundholding" it are too early to analyze today because of the relatively short period of its application. Most likely, they will be linked to the fact that the project "fundholding" is not based on actual cash flows, but on calculated models.

In health care, as generally in the USSR economy of that period, market mechanisms represented a main lever, which could be run during the implementation of the ***compulsory***

health insurance (CHI)[12], where new market structure, such as insurance companies and health insurance funds, were independent of medical institutions intermediaries between doctors (medical services providers) and patients (buyers of medical services). The intention here was to make the intermediaries control spending by health care facilities, that should lead to the reconstruction of the health care system. Thus it was assumed that the insurance companies, by paying hospitals and clinics cost of provided medical assistance to the population, should be economically interested in protecting the interests of patients. It was hoped that there would be competition between insurance companies as in the fight for consumers, and the providers of medical services.

Since 1992, changing the order of formation of budgeting. Health care expenditures were mainly determined by the level of economic development of regions regardless the actual needs. Inequalities in regional health care financing automatically lead to the reduction of opportunities for alignment at the expenses of the Federal Mandatory Health Insurance Fund (FMHIF). In most regions, hospitals and clinics were funded from a variety of sources: local budgets and mandatory health insurance funds (MHIF) that complicated the whole process of control and organization.

The introduction of mandatory health insurance since the very beginning held in the situation of increasingly unbalancing between economic and social systems of society, which undoubtedly contributed to the reduction of the expected socio-economic impact[13]. On the one hand, was laid the real mechanism of reforming and state regulation of health care in the transition to the market economy, and on the other, all levels of management showed obvious problems and disadvantages of the legislative, organizational, technological and psychological nature which has become an obstacle of the reform process (Reshetnikov, 2001). There was a partial duplication of functions of CHI funds and health care authorities. Funds moved along the extended chain, which is not always contributed to bring them up fully to patients. Significant financial resources were dedicated to the maintenance insurance funds and insurance companies. Different principles of financing of health care facilities (from the budget and from the CHI funds) impeded planning of health care costs, eroded economic and legal responsibility for the provision of specific types of medical care to the population, and contributed to the financing of excessive capacity of health facilities, regardless of the actual amount of work.

Health Care Reform with the beginning of the 2000s, composed not only by economic but also social reforms. Currently, as main directions of reforming of health care industry were highlighted the improvement of regulatory and legal framework as well as financial and economic mechanism, scientific organization of medical care providing, including the use of evidence-based medicine, the formation of attitudes among the population in favor of a healthy lifestyle and perception of health as the most important value in life.

[12] Law "On Health Insurance in the Russian Federation" was released in 1991. The law was revised and 2 April 1993 replaced by a Federal Law, served as the basis for creating health insurance system. The law provided the introduction of two types of medical insurance: compulsory and voluntary.

[13] Content analysis of medical literature of the period 1997-1998 shows a lot of conflicting opinions about the ways to reform health care system. In most cases, representatives of the public health system had a negative attitude to this innovation, and representatives of the mandatory health insurance tried to prove that this is the only way of salvation of health care sector (e.g., Ivanov, 2012).

Present mechanism of health care financing

A distinctive feature of health care facilities financing in Russia today is a high fragmentation of funding sources, which are: regional budget, mixed source consisting of both regional and federal budgets, mandatory health insurance funds and income from revenue activities. According to official statistics, Russian health care is mainly financed by the budget and insurance funds.

> *The relative role of these components in different regions of the Russian Federation is different. Insurance and budgetary resources in each region are involved in the financing of health care to a different extent, depending on local economic and political situation. So, local authorities in economically disadvantaged ("poor") regions experiencing more difficulties. Until now, the attempts of the Federal CHI Fund to equalize the conditions of financing of health care in all Russian regions were not sufficient so as to cope with the very different state of regional health budgets, and eventually growing inequality*[14].

Percentage of each of the sources in the financing of health care in the period from 2000 to 2010 is as follows: federal expenditures averaged 0.7% (% of GDP) and the consolidated budgets of the Russian Federation subjects (regional level) - about 2%; budgets of territorial extra-budgetary funds (including compulsory health insurance fund) - 1.3%. It is assumed that the share of the compulsory health insurance in the structure of health care costs will be growing in the nearest three-four years; at the same time medical facilities will be funded on the basis of services rendered, i.e. "money will follow the patient" and the citizen can independently choose the insurance company, medical facility and doctor. As a result, medical facilities funding will depend on the number of patients.

Health expenditure in the federal budget for 2014 are expected to reach 462.1 billion rubles (10.5 billion euros), or 3.2 % of the total expenditures of the federal budget (0.6 % of GDP). For comparison, in 2013 health expenditures amounted to 503.9 billion rubles (11.5 billion euros). It is expected that expenditure on health in absolute terms in 2015 will not exceed 373.1 billion rubles (8.5 billion euros) and in 2016 their share will also decline. Despite the seemingly impressive on the absolute values of health expenditure, the share of total health expenditure from the budget (according to the Accounts Chamber of the Russian Federation) is an average of just over 4% of GDP, including the expense of the state which is about 3%, and by at the expense of the population more than 1%. So, for instance, in the U.S. health care system needs used to spend more than 17% of GDP, in Britain and other developed countries of Europe, on average 10% of GDP and slightly less than 7% in Eastern Europe and the Baltics (see Fig. 1).

Nonetheless, a simple comparison of the volumes of financing would not be enough, because in this case it is necessary to correlate the results as well. First, in order to achieve European life expectancy and mortality scale, domestic financing is clearly insufficient. Second, for achieving Russian health care indicators, the financing may even be redundant. Thirdly, the funding system can be relatively less expensive, providing relatively higher rates of health of population in general at a relatively lower cost[15].

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[14] In 55 regions of the Russian Federation health care costs per capita are below the national average, in 33 regions - above. The minimum value of this parameter in more than five times less than the average, and the maximum - 2.5 times more (Tacis, Review of Russian Health Care Finance System).

[15] As an example, there could be given the UK and the U.S. cases. Comparison of health care financing and state of

International experience shows that it is necessary not only to increase spending on health care, but look for the most effective mechanisms, on the one hand, of mobilization, and on the other - the distribution of resources on public health. For Russia, despite the investments made in health, among the main concerns the problem of low efficiency severely limited resources. This raises the question of how to finance health care, where the main reallocation of the resources occurs between funding from public or private sources. In Russia, private expenditures usually include voluntary insurance, official fees (co-payments) and so-called payments in an "envelope".

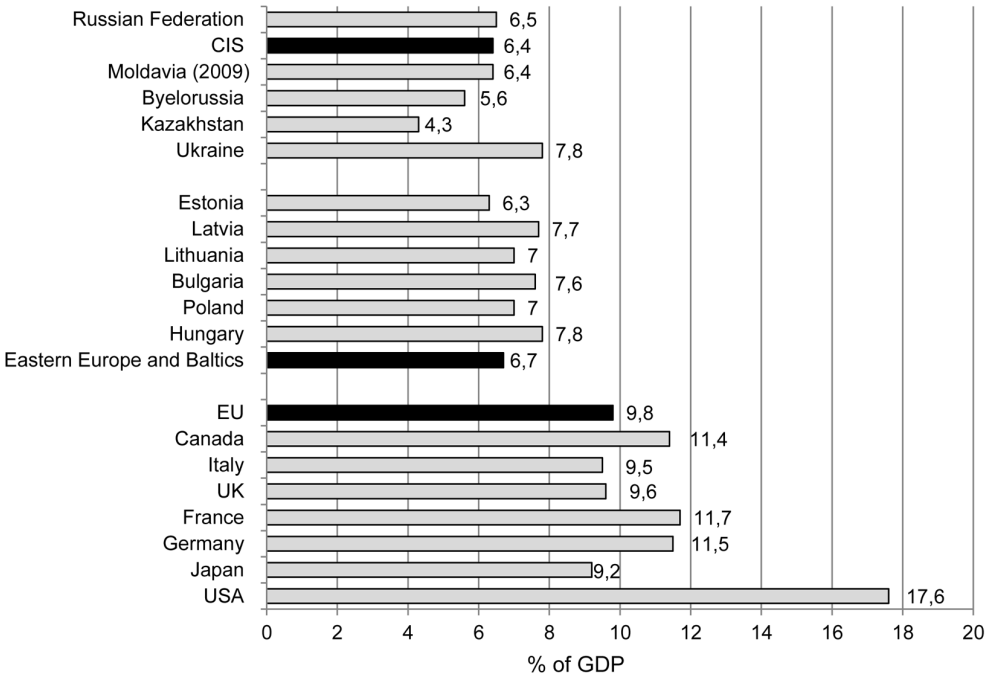

Fig. 1 Total health expenditure across selected countries as % of gross domestic product (GDP) in 2010, WHO estimates[16].

Assessing of the scale of private expenditure varies over a wide range from 25 to 60 percent of total health spending. Some independent experts believe that during certain time periods means of the population, in particular for paid medical services, medicines and illegitimate payments accounted for about half of public spending. According to WHO data, the share of private spending accounts for more than 40% of total health expenditure (Tab. 4), and most of them - more than 80% in 2012, - are private expenditure[17].

health in these countries shows that, although the United States spends on health care almost two times more than the UK with a significant proportion of private funding, health indicators in these countries are comparable, and some are even better than in the U.S.

[16] The issue of exact volume of financing coming in Russian health care appears to be difficult, first of all, since not all financial flows can be registered. Second, the indicators used by official Russian statistics are different from those established by WHO. For this reason the share of total health expenditure from various data base may differ.

[17] Despite this, a significant number of citizens do not have the ability to use paid medical services due to low income: according to recent sociological studies, about 30% of Russians cannot afford fee kinds of health services due to low credit, and this indicator may be increased by one-third, depending on place of residence.

Table 4 Health expenditure in Russian Federation

Health expenditure	2000	2003	2006	2008	2012
Total expenditure on health as % of gross domestic product	5,4	5,6	5,3	4,8	4,0
General government expenditure on health as % of total expenditure on health	59,9	59,9	63,2	64,3	58,7
Private expenditure on health as % of total expenditure on health	40,1	41,0	36,8	35,7	41,3
General government expenditure on health as % of total government expenditure	12,7	9,3	10,8	9,2	9,7
External resources for health as % of total expenditure on health	0,2	0,2	0,1	0	…
Social security expenditure on health as % of general government expenditure on health	40,3	43,7	42,3	38,7	44,6
Out-of-pocket expenditure as % of private expenditure on health	74,7	71,1	81,5	81,3	87,8
Private prepaid plans as % of private expenditure on health	8,1	6,6	10,2	10,6	7,1
Per capita total expenditure on health (PPP int.$)	369	551	699	985	1277
Per capita government expenditure on health (PPP int.$)	221	325	441	633	749

Source: World Health Statistics. WHO, 2013.

In this context, a problem of equity in relation to health care financing becomes evident. Fiscal medical system, with both advantages and disadvantages, has an important advantage which consists in the fact that public funding provides control over the funds (as opposed to insurance systems) and implementation of national priorities, the main of which is the access of the population to medical care. In addition, centralized management enables effectively inhibit the growth of medical costs. In this regard, the budget system of financing of health services seems to be more in line with the reasons of both economic efficiency and social equity, providing a balance between them (Mechanik, 2011; Chubarova, 2004). Wherein, in the modern civilized world is accepted as an axiom that health care resources should be distributed equitably.

Management of change: The open issues

Each country historically form and develop its own way to mobilize economic resources for health care, for preservation and promotion of public health. Quantity and quality of resources allocated by society, as well as their effective use in health care is determined by the complicated system of economic, political, and even moral and ethical and other relations, historically formed on the territory.

The main motive of the transition to a mixed model of health care financing in Russia in 1990th was a lack of public funds and the need to mobilize resources from other sources. The option of financing health care, selected under conditions of limited resources for health care, was initially expensive and leaded to the need of increase funding for health. Consequently, it is legitimate to suppose that today there should be selected such option of financing system, which would allow to transform allocated funds in to the effective system of providing quality health care, but not just to increase spending on health.

Mainstream of changes of the last decade, made to the budgetary allocations in health, were series of innovations aimed at transition from previous estimate and cost-allocation policy to program-target principle. Investigation on regulatory sources suggests that this process is still in the stage of transformation: documents reviewed are clothed in the traditional cost-estimate form but using program-target blocks (that can undoubtedly be attributed to a step forward), while "real" program formation, implying a modification of the budget classification, will begin with 2014. Wherein, sectorial ministries and departments were identified as responsible for the development and implementation of state programs. There is also specified composition of directions and routines included in the public health care development program, which shows that the areas of program development includes health developed and implemented in the previous period the federal target program, as well as the Priority National Projects. Thus, the composition of the new government long-term programs preserves the continuity of previously developed activities with a corresponding correction in the proposed implementation period.

Under the changing circumstances local authorities combine new and old principles of financing, and speed and success of the transition to new ways of working vary considerably in different regions of Russia. The materials of the WHO European Office notes that in some areas, a new method of funding is not used at all, in others it involved only a few areas, it is embedded in the third, but without the participation of insurance companies that are considered the CHI scheme of financing disadvantageous for themselves. Analyzing approaches used by different regions to modernize health care, there could be distinguished:

- introducing a mechanism of placement of municipal contracts (task-order) providing health care services;
- various embodiments of planning and coordination of health care volumes (e.g., by district principle; by the method of program-oriented planning of budgetary services; by the specification of types of visits – primary, recurrent, prevention, dispensary, home visits etc.; in terms of cases of completed treatment; by the implementation of the system of indicative planning of financial costs on the basis of uniform standards and norms of expenditures);
- testing of elements of single-channel financing of health care facilities through the CHI system.

Summing up, systemic health care reform at the present stage involves at least three mandatory components.

First, it is the financial and economic reform, including the restructuring of the health care industry.

Second, it is improving the quality of health care management on the basis of scientifically grounded management technologies.

And, finally, it is the development of medical practice based on the principles of evidence-based medicine and on the results of clinical and economic analysis.

In fact, the need for reform of the financial and economic system of health care, the essence of which is the ***transition from cost management***, i.e. budget funds and mandatory health insurance funds to ***results management***, comes to the foreground. Wherein, the basis of the forming of expenditure of funds supposed to become a clearly defined objectives and quantifiable results of operations, as well as planned and agreed by all stakeholders workloads of medical facilities.

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