

The Conceptual Approach to Statistical Research of the Development of Voluntary Health Insurance in the Russian Federation

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Abstract

The article presents a conceptual approach of researching of voluntary health insurance development in the Russian Federation. The technique of a statistical research of the development of voluntary health insurance in Russian Federation was developed. The main factors affecting the development of voluntary health insurance in Russia were identified. A multidimensional typology of regions of the Russian Federation on factors causing the development of voluntary health insurance was conducted. A prediction of the main indicator of Russian voluntary health insurance market (the volume of collected insurance premiums) was held. The basic directions of development of the Russian system of health care financing were defined. For every direction of development of the Russian system of health care financing measures to encourage the development of voluntary health insurance are offered.

Keywords: *volunteer health insurance, obligatory health insurance, health care financing systems, statistical methods*

1. Introduction

In 2013, total health spending in Russia amounted to 5.84 % of GDP. Over the past ten years, the volume of appropriations from all sources for health care of the population and modernization of the sector increased by 4.97 times and in 2013 amounted to 3.89 trillion rubles. The bulk of health care is funded by public sources of payment for medical care. It accounts 62.37 % of total health expenditure on average for the period.

Financing of the public health system is based on the "Program of state guarantees of free medical care to citizens of the Russian Federation". Over the past five years, the cost of the program averaged 82.27 % of public spending on health care. However, these costs are not enough to ensure full coverage of the state's obligations to protect the health of every citizen. For example, the regional program of state guarantees are executed with a significant deficit. The maximum deficit of execution of regional programs of state guarantees celebrated in 2009 - 384.6 billion rubbles. In 2013, the regional program of state guarantees have not been fully implemented in 58 of the 83 subjects of the Russian Federation. The maximum level of the deficit from the planned amount of funding stated in the Republic of Dagestan - 22.11 %.

Lack of the public health system funding impacts on the quality and availability of free (public) medical care. Poor quality and availability of free medical care is manifested in people's dissatisfaction of medical services provided with public health facilities. Thus, the average level of satisfaction of received medical care does not exceed 40 % according to the annual population surveys conducted by the Ministry of Regional Development of Russian Federation. For example, the value of this indicator in 2009 was 34.7 %, in 2010 – 34 %, in 2011 - 35.8 %. According to the poll of All-Russian Public Opinion Research Center, only 44 % of respondents positively assessed the state of the Russian health care system in 2014. Thus, the majority of the population is not satisfied of received medical care and forced to find alternative more effective means of its obtaining.

At the same time "negative" scenario of the "Development of Health care system – 2020" program, which the

Government of the Russian Federation adheres to, provides a gradual reduction of the share of public spending on health in country's GDP. Government spending on health care has fallen to 3.47 % of GDP in 2013. It is planned to decrease the value of this indicator to 3 % of GDP in 2015 and to 2.5 % of GDP in 2020. Thus, we can objectively assume that the situation will not change significantly in the short term. Moreover, we can expect growth inhibition of low volume of free medical care per capita and reducing its quality and availability.

All of this allows us to speak about the necessity to change the existing financing mechanism of the Russian health care system. In particular, Russian health care system needs to develop commercial sources of funding to reduce the burden of budget system and state off-budget funds.

2. Methods and Materials

In order to assess the prospects of the Russian system of health care financing development and to analyze capabilities of solving its problems through the development of voluntary health insurance the concept of the research was developed (Fig. 1).

The proposed concept defines goals and objectives of the research and applied methods for their implementation. Thus, we developed a method of statistical research of the development of voluntary medical insurance in the Russian Federation, which consists of 8 basic steps.

In the first stage the construction of a system of statistical indicators characterizing the development of health insurance is carried out. Information base of research constitute regulations of the Russian Federation and a data of the: Central Bank, Federal Service for Insurance Supervision, Federal State Statistics Service, Federal Mandatory health insurance Fund, All-Russian Union of Insurers.

At the second stage the analysis of the Russian health financing system with the methods of descriptive statistics, graphs, tables and grouping is conducted. The amounts of financial resources allocated to health care and the structure of the sources of their formation are determined. The role of voluntary health insurance in health care system financing is assessed. Then, the main issues, trends and directions of development of the national system of health care financing are identified. The result of this step is to determine the prerequisites of the development of voluntary medical insurance in the Russian Federation and the substantiation of the urgent need of enhancing its role.

At the third stage an international experience of the development of health financing systems is explored. Rating of the effectiveness of global health financing systems is carried out. Volumes and structure of funding sources for the industry are analyzed. Particular attention is paid to the insurance-based health care financing systems, to mechanisms and features of its functioning.

At the fourth stage the research the current state of voluntary medical insurance in the Russian Federation is carried out in the context of development of the insurance market. Volume and the structure of the volunteer health insurance market are analyzed using the methods of descriptive statistics. A comparative characteristic of voluntary health insurance development in context of other types of insurance development is conducted. An analysis of insurers' activity is carried out. Regional differentiation of health insurance development is determined. The problems and the main trends of the voluntary health insurance development in Russia are identified.

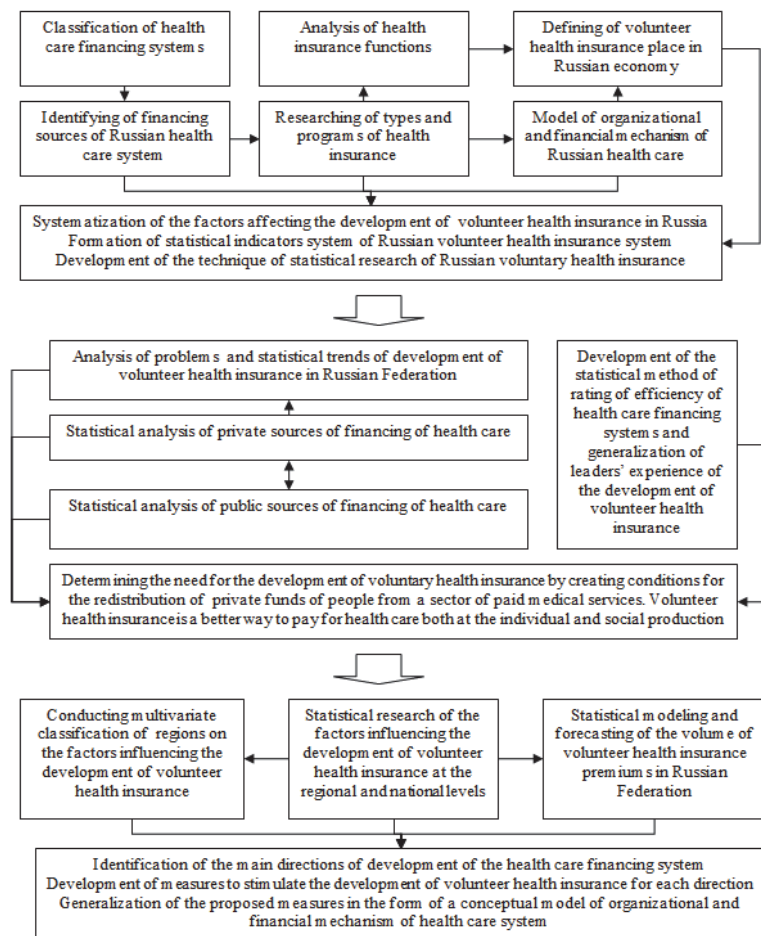


Figure 1. The logic circuit of statistical research of voluntary medical insurance development in the Russian Federation

At the fifth stage a multi-dimensional classification of Russia's regions by socio-economic indicators influencing the development of voluntary health insurance at the regional level is conducted. With the component analysis summarizing characteristics are allocated. These "main components" allows to compress the information space of classifications features. Then the typological groups of the Russian Federation regions in terms of socio-economic development and the state of voluntary health insurance are formed. After that the regions of the Russian Federation with the most favorable conditions for the development of voluntary health insurance are identified. At this stage we used statistical methods such as grouping, contingency tables, principal components method, cluster analysis, regression analysis.

At the sixth stage the main factors that have a significant impact on the development of voluntary health insurance in the Russian Federation are defined with the main factors method. Then, using these factors the regression model of the Russian market of voluntary health insurance is constructed.

The sixth stage is about the constructing of a regression model of the volume of Russian market of voluntary medical insurance. To construct a regression model the main factors that have a significant impact on the development of voluntary health insurance in the Russian Federation are defined using the method of main factors. Then via regression analysis the model is built on four factors. To improve the predictive quality of the regression model special statistical measures are taken.

At the seventh stage the main trend of voluntary health insurance development in Russia is researched. Forecasting of the main indicator of development of voluntary health insurance market - the volume of collected insurance premiums is produced. Prediction is performed using trend models and time series. As the result at this stage of the research should be the assessment of the prospects of development of voluntary health insurance, taking into account the factors that have a significant impact on the development of voluntary health insurance in the Russian Federation.

At the eighth stage the measures of encouraging of the development of voluntary health insurance on the basis of

the experience of Germany, France, and the author's own suggestions are offered. Proposals for these measures testing are formed and the model of the structure of the Russian health care financing system is build, taking into account the proposed measures.

3. Results

Despite the annual increase of extent of state health care system financing, the proportion of fee-based (commercial) medical services in the structure of sources of financing of health care remains one of the highest and constitutes 32.85 % on the average over the last 10 years, which, on one hand, proves dissatisfaction of the population with the quality and the availability of free medical care. On the other hand it points at a significant scope for the development of voluntary health insurance, which is currently one of the minor sources of health financing with the average specific gravity of 3.46 %.

The development of voluntary health insurance by creating conditions for the redistribution of public funds in a sector of paid medical services will help reduce the load from the budget system of the country and state budget funds, including funds of the mandatory health insurance through performing functions typical to it as a kind of commercial insurance (savings and investment function).

Voluntary health insurance market of the Russian Federation is firmly divided between large universal federal insurers (SOGAZ, RESO-Garantia, Ingosstrakh, ZHASO, Alliance, etc.). To the share of nine leading insurers fall 66.88 % of all insurance premium (76,89 billion rubles). Current situation bears evidence of a low competition and the presence of significant barriers for smaller insurers to market access.

Voluntary health insurance in the Russian Federation is the second most developed kind of voluntary insurance and accumulates an average of 16.15 % of insurance premium in this segment of the insurance market. However, it could not be "massive" type of insurance, as was planned in 1994 by adoption of the Law "On medical insurance of citizens in the Russian Federation". So, now the share of voluntary health insurance constitutes an average of only 10.05 % of all insurance contracts.

Thus, the basic premise of restricting the development of voluntary health insurance is a lack of broad demand for its services from individual clients. The share of "individual" voluntary health insurance in the Russian Federation is only 17.36 %, while the "corporate" voluntary medical insurance constitutes 83.64 %.

On the basis of handled statistical analysis seven main reasons for the lack of "mass" demand for "individual" voluntary health insurance could be determined:

- low financial solvency of the majority of the population;
- significantly higher cost of "individual" policy;
- lack of insurance coverage for serious illnesses;
- poor development of private health care in the regions of the country;
- lack of economic incentives for the population to buy medical insurance policy;
- low level of insurance culture in the country;
- priority development of the mandatory health insurance in Russia.

Under these conditions the development of voluntary health insurance market is extensive in nature since the extent of collected insurance premiums (average annual rate of growth is 114.6 % over the last ten years) takes place without any significant customer engagement (average annual growth in the number of concluded contracts amounted to 101.26 %). Thus, the market voluntary health insurance is in a state of stagnation and its further development will require a significant transformation (legal, infrastructure, etc.).

Using the developed method of rating the efficiency of foreign systems of health financing the place of the Russian Federation is estimated, international experience of voluntary health insurance is generalized, and the main ways to increase its role in the countries with the insurance payment system of medical care is identified. With the help of the developed methods the experience of development of voluntary health insurance of France and Germany has been identified as the most suitable for use in the Russian Federation.

In the current circumstances a voluntary medical insurance in the Russian Federation possesses a regional development trend, as traditionally the most developed insurance markets have already been domesticated (ten leading regions accounted 82.98 % of all insurance premiums collected for this type of insurance in the country). Thus, insurance companies are in need of recommendations which characterizes the most promising areas of regional development. With this view, using a component analysis the major factors affecting the development of voluntary health insurance at both the national and regional levels are identified:

- material security (level of economic activity, per capita cash income, net financial result of enterprises);
- demographics (migration gain of 10,000 population);
- changes in the labor market (the unemployment rate according to methodology of the International labor organization);
- the availability of medical care (number of doctors per 10,000 population, population density per 1 km. sq.).

On the basis of the selected general factors the method of multidimensional classification of the units of Russian Federation is developed, which is based on the factors influencing the development of voluntary health insurance. Seven typological groups of regions are derived. In working out the strategy of development of voluntary health insurance the particular attention should be paid to the subjects of the Russian Federation:

- second cluster: Kaliningrad region, Krasnodar region, Leningrad region, Moscow region, Novosibirsk region;
- the fifth cluster: Belgorod region, Smolensk region, Stavropol region, Tambov region, Voronezh region, Kaluga region, Krasnoyarsk region, Kursk region, Lipetsk region, Yaroslavl region, Novgorod region, Ryazan region, Tver region, Tula region.

In the regions above mentioned clusters the extent of collected insurance premiums for voluntary health insurance is not comparable with the existing conditions of social and economic development. It is necessary for insurance companies to optimize the work on engaging new customers to the service, and to expand the range of insurance programs.

Developed econometric models, including models of stationary ARIMA time series of the main indicators affecting the development of voluntary health insurance, allowed to build a forecast extend of insurance premiums on the mentioned type of insurance.

Projected values of insurance premiums in the 2014-2018 indicate that this type of insurance will not be able to accumulate a competitive mandatory health insurance financial resources. In the current environment to development voluntary health insurance it is necessary to adopt certain legislative action aimed at changing the structure formed by the health financing system.

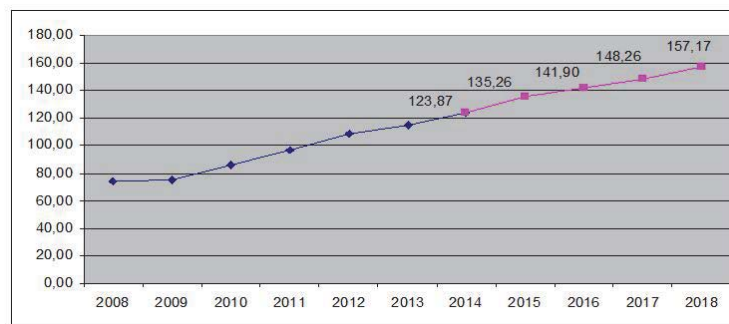


Figure 2. The forecast of volume of insurance premiums for voluntary health insurance in 2014-2018, billion rubles

On the basis of the comprehensive statistical analysis of the national system of health care financing and the consideration of international experience, we have identified three possible directions of its development:

- maintaining the current rate for the priority development of the compulsory health insurance without legislative exemptions for voluntary health insurance;
- creation of conditions for the development of long-term cumulative voluntary health insurance on the basis of the German model of health care financing;
- creation of a system of health care financing with a significant participation of the population in co-financing of health care based on the experience of France.

For each possible directions of development of the Russian system of health financing several measures to support the development of voluntary health insurance are substantiated. For example, if the current heading on prevailed development of the mandatory health insurance without legislative exemptions for voluntary health insurance remains, the list of measures aimed at stimulating its development would become significantly limited and would contribute to the solution of the problems only in part. However, among the most effective measures, we propose:

- develop and actively implement insurance programs of serious diseases with a high risk of symptoms among residents of our country or a particular region;

- legally oblige companies, which employ migrant workers, to provide them with the voluntary health insurance which cover the risks of emergency medical assistance in outpatient settings, as well as at the hospital;
- increase for small and medium-sized businesses the deduction rate of insurance premiums for voluntary health insurance at the cost of 6 % to 9 % of payroll;
- for the insurers to take measures to inform potential customers – natural entities on the possibility of obtaining a tax deduction for health care premiums and voluntary health insurance of up to 120 thousand Rubles;
- for the public authorities to establish a mechanism of compensation indicated above tax deduction because today it is actually quite difficult to get it, regardless of the poor awareness of tax officials;
- specify the obligations of the state in terms of covering the population on mandatory health insurance, and in terms of financing health care.

For the development of voluntary health insurance in Russia by German model it is necessary to adopt sectoral legislation that would clearly define the place of voluntary health insurance in the sources of financing of health or following amendments to the existing Federal Law № 326-FZ of November 29, 2010 "On mandatory health insurance of citizens in Russia":

- allow the coverage of full range of insurance cases at the expense of voluntary health insurance. At the moment, there is a limit according to which in the framework of the commercial MS only risks that are not included in the basic benefits package are covered;
- allow the formation of joint insurance programs of mandatory health insurance and voluntary health insurance by giving the insured person the free choice of the list of medical services and the sources of their funding. This event will remove duplication of services between the mandatory health insurance and voluntary health insurance, respectively, reduce the burden on the budget system of the country, in general, and optimize organizational processes in both systems;
- creation of conditions for the development of mutual health insurance companies;
- release from payment of insurance premiums those people, who have income above a certain maximum level for three years or more, upon condition that they have voluntary health insurance policy covering medical care at a level not lower than the basic benefits package of mandatory health insurance.

Creating a system of health care financing with a significant participation of the population in co-financing of health care on the basis of French experience suggests:

- to enter the share interest of the population and the employers in the financing of health care, while the share of participation should be increased gradually, reaching thus "point of equilibrium";
- the "franchise" payments should become widely used;
- to replace the premiums for compulsory health insurance of the working population, levied on a flat scale of payroll, to a single insurance fee, which is deducted from the profits of enterprises according to a progressive scale of charges depending on the profitability of the industry in the previous fiscal year.

4. Discussion

The main conclusion, derived by the author, is recommended for use in the educational process of higher educational institutions that train students on economic specialties. In addition, the research results are implemented in the Territorial mandatory health insurance fund of the Republic of Buryatia and the Territorial Authority of Federal State Statistics Service in Republic of Buryatia.

5. Conclusion

Conducted comprehensive statistical analysis of the status and trends of health insurance has revealed that insurance health financing system are recognized as the most progressive and socially significant in the world, because they allow to ensure high availability of free medical care to the general public at the same acceptable level of quality. However, the main problem of such systems is their high cost and the growing shortage of execution of volumes of obligations on state guarantees. Under these conditions, sooner or later there is a need to develop alternative sources of state financing of health care. Therefore, the creation of conditions for the development of voluntary health insurance should be a new stage of reform the national health system.

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