COMPARATIVE ANALYSIS OF THE ECONOMIC PROVISION OF HEALTH CARE OF FOREIGN COUNTRIES AND UKRAINE

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ABSTRACT

The manuscript focuses on researching and generalizing the experiences of the economic provision of existing foreign health care models. Under the economic regulation of health, the authors of the work understand the components, which combine financial, material, and human resources. The article presents a comparative analysis of economic support for the health systems of different countries. The study covers the period from 2007 to 2016. Indicators used are derived from the databases of the Organization for Economic Cooperation and Development (OECD) on health. A content analysis of scientific literature and Internet resources, databases of international organizations, which contain data on the economic provision of health care systems of different countries, was conducted. Bibliosemantic, comparative, and analytical methods are used.

Keywords: health care expenses, insurance, medical services, reform

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INTRODUCTION

The relevance of the study is related to the ongoing process of reforming the health care sector of Ukraine. The first steps of the process of reform relate to changes in primary (first aid) care, which are currently undergoing reorganization within the medical institutions. Namely, those undertaking reforms are working with communal non-profit enterprises, helping to bring their logistical support into line with industry standards. Building infrastructure through computerization of the institutions and implementing high-quality services for patients will be partially funded through contracts awarded by the National Health Service of Ukraine. The results of the reform efforts in the health sector are aimed at improving the quality and efficiency of health care services. Therefore, it seems appropriate to study and benchmark international experiences and then identify and replicate their successful strategies and rational use of resources.

The task of improving the performance of the industry, which is being addressed today in Ukraine, is mainly in line with the goals of other countries and the World Health Organization (WHO). When choosing health care financing, the EU countries rely on WHO's intentions

(Thomson, Foubister, Mossialos, 2010): financial protection (aimed at preventing people from becoming impoverished as a result of using health services); the principle of social justice (requires more well-paid people to pay more for medical care); equality of access to medical care (based on need, not on ability to pay); transparency and accountability of the health care system (fighting corruption, monitoring the activities of health facilities, and assessing the quality of their actions); rewards for high quality medical care and development of incentives for cost-effective organization of medical care; and support of managerial efficiency. Ukraine also promotes these goals and plans to achieve them in the course of reform gradually.

ANALYSIS OF RECENT RESEARCH AND PUBLICATIONS

Generalization of international experience in the organization and financing of the field of protection became the subject of research by many domestic and foreign scientists. Scientists note that Ukraine has the lowest ranking place in the European region regarding the state of health of citizens. From 12 to 14 million people in the country suffer from cardiovascular disease, more than 1 million Ukrainians suffer from cancer, more than 1 million 100 thousand people are ill with diabetes, and a large proportion of residents are sick with HIV and tuberculosis. Mortality in Ukraine is 14.7 per 1,000 population versus 6.7 in the EU member states (Petrashik, 2015; Doroshenko, & Shevchenko, 2017).

As an example, a study by Sheiman & Shevsky (2015) demonstrated aspects of personnel policy in health care by conducting a comparative analysis of Russian and international practices. Other studies included discussions on the progress of healthcare reform in Poland (Jaworzyl'ska, 2016; Kulesher & Forrestal, 2014). The research of health care delivery models in Europe, South America, Asia, and North America was focused on the respective cost structures (Kulesher & Forrestal, 2014). The results of the comparison of the Polish health system with systems of countries such as the Netherlands, the USA, Germany, Russia, and the United Kingdom made it possible to offer proposals for changing the Polish health system (Jaworzyl'ska, 2016). A study by Mueller & Morgan (2017) presented international comparisons of health care expenditures and explored the role of governments in this type of financing.

Studies show that health care costs depend on the economic development of the respective countries. (Gomez-Gonzalez & Ruth Reyes, 2017). The cost structure of health care differs. In 2014 in countries with low and middle income per capita, the cost of health care from their funds was 36% (Bishai & Cardona, 2017). For the best results, selective funding is needed, which is made possible by state health policy (Getzen, 2010). Most of the 126 countries in the world show two critical trends in health care financing: health care costs are rising, and the share of spending on medical care is decreasing (Fan & Savedoff, 2016). The share of total health expenditures is not income-related but depends on the country's ability to increase its total revenues (p. 118). Such results confirm the influence of state policy on these trends.

As society strives to achieve the Sustainable Development Goals (SDGs), it requires significant investments in various sectors, including healthy lifestyles and the well-being of citizens. To achieve these goals, a forecast was made that by 2030 in low-and-middle-income countries, the share of gross domestic product for health care will increase to 7.5% (Stenberg, Hanssen, Tan-Torres Edejer, et al., 2017). The total cost of health care will be, on average, USD 271 per person (range $74-$984). Taking into account the expected resource constraints, each country needs to prioritize, plan strategically, and implement its path to achieving sustainable development goals (SDG).

The purpose of this work is to provide a comparative analysis of the economic provisions of world health models and trends in the development of such provisions in the health care model of Ukraine. The study covers the period from 2007 to 2016. The data are sourced from the OECD database on health. The materials and methods of analysis include a content analysis of scientific literature and Internet resources, databases of international organizations (WHO, World Bank, Organization for Cooperation and Economic Development,

etc.), which contain data on the economic provisions of health care systems of different countries. Bibliosemantic, comparative, and analytical methods are used.

STUDY RESULTS

Under the economic support of the development of the health care sector, the authors of the research understand the components that combine financial, material, and human resources that create the necessary conditions for the preservation and strengthening of the health of citizens to achieve sustainable development of the state (Savchuk, 2018). The economic development of the health care field lies in the sphere of economic relations that are objectively developed between subjects and objects of the market in the process of provision of medical services. The main features are the ratio of ownership, ways of financing (obtaining resources), incentive mechanisms for health workers (health care providers), and people (service users) (Baeva, 2008). Based on the international experience of the organization of health care, one can distinguish the following economic models of health care: Beveridge, Bismarck, and Private.

The Beveridge model (combines state measures that provide a guaranteed minimum level of social protection and the benefits of social insurance). A typical advantage of the model is the possibility of applying various approaches to health care financing. Still, the central role is played by the state budget (the amount of financing is taken in the process of planning the expenditure of the state budget as a whole). All citizens are covered by insurance, which provides sick treatment free of charge (unified medical care). Insurance funds within such a model of health care are not goal-oriented. Providers of medical services compete for receiving budget funds. Responsibility for a fair distribution of the budget between the providers of health services is primarily the responsibility of the regional health authorities. The healthcare market is tightly regulated in terms of price and quality. This leads to the fact that the private sector is insignificant. The Beveridge model is typical of health care in Scandinavian countries, Ireland, Great Britain, Southern Europe, south-eastern Europe, Canada, and New Zealand.

The Bismarck Model (a socially oriented health system). The advantage of the model is the multi-channel financing system. The model includes targeted contributions from employers and employees; budget subsidies from general or target revenues. The size of the contributions is determined by the possibilities of their payment by the population and access to services based on need. The Bismarck model operates in Germany, Austria, Belgium, the Netherlands, France, Luxembourg, Canada, Japan, Israel, the countries of eastern Europe, that have recently joined the EU, Romania, Bulgaria, and Russia.

The Private Healthcare Model (includes paid medicine that provides market-based services using private health insurance). A characteristic feature of the model is the competition between private insurance companies. The advantage of this model is the independence of insurance funds. Management of the latter occurs through public or private insurance companies, whose activities are strictly regulated. That is, the implementation of health insurance is a function of self-governing independent organizations that have their budget, autonomous management, and legal status, which ensures independence from the government and the state budget. Among the advantages of this model are: The presence of incentives for the development of professional health workers, ensuring high quality of medical care; mobility of resources; and intensive development of new medical technologies. A private model is typical in the United States, Switzerland, the Philippines, South Korea, and Australia.

Considered are the peculiarities of the economic provision of health care models of different states. First, are the specifics of the use of financial resources. The level of financing in the health care system in countries where the Beveridge model dominates for the period under study ranges from 7.5% to 10.5% of GDP in Table 1.

Table1. Health care expenditures

Countries	% of GDP		Deviation + / -	Per capita, USD		% Increase 2007 to 2016
	2007	2016		2007	2016	
Bismarck model						
Germany	10.0	11.3	+1.3	3,695	5,551	150.2
Japan	7.9	10.9	+3.0	2,724	4,519	165.9
Czech Republic	6.0	7.3	+1.3	1,571	2,544	161.9
Luxembourg	6.2	6.3	+0.1	5,512	7,463	135.4
Netherlands	9.2	10.5	+1.3	4,015	5,385	134.1
Slovakia	7.2	6.9	-0.3	1,521	2,150	141.3
France	10.0	11.0	+1.0	3,412	4,600	134.8
Belgium	9.0	10.4	+1.4	3,299	4,840	146.7
Estonia	5.0	6.7	+1.7	1,104	1,343	121.6
Austria	9.5	10.4	+0.9	3,710	5,227	140.9
Slovenia	7.5	8.6	+1.1	2,068	2,835	137.1
Canada	9.3	10.6	+1.3	3,668	4,753	129.6
Poland	5.9	6.4	+0.5	986	1,798	182.3
Hungary	7.3	7.6	+0.3	1,374	2,101	152.9
Israel	6.9	7.4	+0.5	1,901	2,822	148.4
Latvia	5.8	5.7	-0.1	1,045	1,466	140.3
Beveridge model						
Norway	8.1	10.5	+2.4	4,497	6,648	147.8
Denmark	9.3	10.4	+1.1	3,632	5,205	143.3
Iceland	8.7	8.6	-0.1	3,552	4,376	123.2
UK	7.5	9.7	+2.2	2,633	4,193	159.2
Italy	8.2	8.9	+0.7	2,774	3,391	122.2
Finland	7.8	9.3	+1.5	2,950	4,033	136.7
Spain	7.8	9.0	+1.2	2,554	3,248	127.2
Ireland	7.8	7.8	0	3,647	5,528	151.6
Portugal	9.1	8.9	-0.2	2,330	2,734	117.3
Greece	9.1	8.3	-0.8	2,653	2,223	83.8
Private model						
USA	14.9	17.2	+2.3	7,162	9,892	138.1
Switzerland	9.6	12.4	+2.8	4,766	7,919	166.1

Source: Based on OECD, 2017

It should be noted that in Ireland, these costs are unchanged and amount to 7.8%. Most states increase their health care costs. For example, over a decade, Norway has increased its costs by 2.4 %, while the UK has risen by 2.2 % of GDP. There is a slight decrease in the direction of decline in Iceland, Portugal, and Greece. Comparing the per capita health expenditure indicator, it should be noted that only Greece has reduced the costs from $2,653 USD to $2,223 USD.

The level of funding in countries where the Bismarck model is dominant varies from 5.7 % to 11.3% of GDP. German holds the leading position. Thus, expenditures from GDP in 2016 amounted to 11.3%. Concerning per capita expenditures, Luxembourg occupies a leading position at $7,463 USD. Suggested evidence from research evidence reveals that the German system is characterized by the availability of several medical public health insurance funds, as well as the presence of public and private providers of health services, as well as decentralization of health care.

According to health care expenditures in the countries that have a private model, the United States is leading at $9,992 USD per person (2016), or 17.2% of GDP. There is an extensive network of private healthcare facilities in the country, where medical services are provided either for direct payment or private health insurance. The activities of state and municipal medical institutions are aimed at the charity and support of vulnerable groups of the population. When analyzing health care expenditures by type of financing in Table 2, in countries that have the Beveridge model, most citizens receive medical care at the expense of state programs. In 2015, the state's share varied from 30% in Greece to 84% in Denmark.

Table 2. Expenditure on health by type of financing, 2015 in %.

Countries	The state program	Mandatory medical insurance	Personal expenses of patients	Voluntary medical insurance	Others
Bismarck model					
Germany	7	78	13	1	2
Japan	9	75	13	2	1
Czech Republic	12	70	15	0	3
Luxembourg	9	73	11	6	1
Netherlands	9	71	12	6	1
Slovakia	4	75	18	0	2
France	4	75	7	14	1
Belgium	18	59	18	5	0
Estonia	11	65	23	0	1
Austria	31	45	18	5	2
Slovenia	3	69	13	15	1
Canada	69	1	15	13	2
Poland	9	61	23	5	2
Hungary	11	56	29	2	2
Israel	17	46	23	11	3
Latvia	57	0	42	1	0
Beveridge model					
Norway	74	11	14	0	0
Denmark	84	0	14	2	0
Iceland	52	29	17	0	2
United Kingdom	80	0	15	3	2
Italy	75	0	23	2	1
Finland	61	13	20	3	3
Spain	66	5	24	4	0
Ireland	70	0	15	12	3
Portugal	65	1	28	5	1
Greece	30	29	35	4	2
Private model					
USA	27	23	11	35	4
Switzerland	22	42	28	7	1
Australia	67	0	20	10	4

Source: Based on OECD, 2017

For the majority of countries characterized by a typical Bismarck model, compulsory social (medical) insurance of citizens is a characteristic feature (a detailed list of compensated services

is practiced). Thus, in 2015, the model's share in Germany was 78%, France and Slovakia 75%, Luxembourg 73%, Slovenia 69%, Estonia 65%, and Poland 61%. However, in Latvia, there is no compulsory health insurance, and in Canada, the model's share in 2015 was only 1%. At the same time, in these states, citizens can receive medical assistance at the expense of state programs. In Canada, in 2015, such health care expenses were 69% and in Latvia 57%.

Table 3. Material resources models in the healthcare

Countries	Number of hospitals per 1 million population.			Hospital beds per 1 thousand population.		
	2007	2015	Deviations, + / -	2007	2015	Deviations + / -
Bismarck model						
Lithuania	33.76	32.7	-1.06	…	…	…
Germany	40.43	38.05	-2.38	8.24	8.13	-0.11
Japan	69.22	72.10	+2.88	13,87	13,17	-0.70
Czech Republic	24.76	24.27	-0.49	7.33	6.49	-0.84
Luxembourg	27.08	21.07	-6.01	7.83	5.69	-2.14
Netherlands	11.60	29.94	+18.34	4.74	…	…
Slovakia	27.72	24.71	-3.01	6.78	5.75	-1.03
France	45.45	46.36	+0.90	7.06	6.13	-0.93
Belgium	19.76	15.79	-3.97	6.63	6.18	-0.45
Estonia	41.02	22.81	-18.21	5.48	4.96	-0.52
Austria	32.55	32.2	-0.35	7.75	7.55	-0.20
Slovenia	14.37	14.05	-0.32	4.66	4.51	-0.15
Canada	22.20	20.06	-2.14	2.96	2.61	-0.35
Poland	24.03	28.09	+4.06	6.42	6.63	+0.21
Hungary	18.06	17.07	-0.99	7.19	6.99	-0.20
Israel	11.84	10.02	-1.82	3.35	3.03	-0.32
Latvia	42.72	33.88	-8.84	7.83	5.89	-1.94
Beveridge model						
Norway	…	…	…	4.86	3.76	-1.10
Denmark	…	…	…	3.69	2.53	-1.16
Iceland	67,4	24.18	-43.22	4.12	3.11	-1.01
United Kingdom	…	29.11	…	3.39	2.61	-0.78
Italy	21.75	18.36	-3.39	3.91	3.20	-0.71
Finland	61.45	48.91	-12.54	6.73	4.35	-2.38
Spain	16.89	16.47	-0.42	3.34	2.98	-0.36
Ireland	40.01	…	…	5.10	3.01	-2.09
Portugal	21.44	21.72	+0.28	3.56	3.40	-0.16
Greece	28.85	26.15	-2.70	4.88	4.25	-0.63
Private model						
USA	18.95	17.66	-1.29	3.14	2.83	-0.31
Switzerland	42.51	34.77	-7.74	5.36	4.58	-0.78

... no data available

Source: Based on OECD, 2017

There are significant amounts of medical care in countries where a private model is accepted on a paid basis. Only in 2015, private funds in the United States accounted for 50% of all health

care expenditures, of which 35% were voluntary health insurance, patients paid 11%, and 4% was the highest in the studied countries in Table 2. Most citizens (86%) have health insurance. Analyzing health care expenditures in this state, it is evident that 58% is comprised of compulsory and voluntary health insurance, 11% purchased independently, 27% received from state programs. The material resources that ensure.

Table 4. Human resources healthcare models

Countries	The number of doctors per 1 thousand population			The number of nurses per 1 thousand population.			The ratio of nurses to doctors, 2015
	2007	2015	Deviations, + / -	2007	2015	Deviations, + / -	
Bismarck model							
Germany	3.49	4.14	+0.65	11.50	13.34	+1.84	3:2
Czech Republic	3.57	…	…	8.03	8.01	-0.02	…
Luxembourg	2.68	3.85	+1.17	…	11.91	…	3:1
Netherlands	…	3.42	…	8.30	10.47	+2.17	3:1
Lithuania	3.88	4.34	+0.46	7.37	7.66	+0.29	1:8
Belgium	2.91	3.42	+0.51	9.24	10.83	+1.59	3:2
Estonia	3.26	3.10	-0.16	6.40	6.01	-0.39	1:9
Austria	4.54	5.10	+0.56	7.38	8.05	+0.67	1:6
Slovenia	2.39	2.83	+0.44	7.72	8.78	+1.06	3:1
Canada	…	2.55	…	9.04	9.87	+0.83	3:9
Poland	2.19	2.33	+0.14	5.18	5.20	+0.02	2:2
Hungary	2.8	3.10	+0.30	5.95	6.47	+0.52	2:1
Israel	3.28	3.44	+0.16	5.11	4.88	-0.23	1:4
Latvia	3.14	3.20	+0.06	5.53	4.68	-0.85	1:5
Beveridge model							
Norway	3.90	4.40	+0.50	13.94	17.34	+3.40	1:2
Denmark	3.40	3.66*	+0.26	14.29	16.7*	+2.41	4:6
Iceland	3.61	2.88	-0.73	14.00	15.45	+1.45	5:4
United Kingdom	2.47	2.79	+0.32	9.58	7.91	-1.67	2:8
Italy	…	3.84	…	…	5.44	…	1:4
Finland	2.69	3.21*	+0.52	13.40	14.66	+1.26	4:6
Spain	3.56	3.85	+0.29	4.60	5.29	+0.69	1:4
Greece	…	…	…	3.23	3.21	-0.02	…
Private model							
USA	2.43	2.57*	+0.14	…	…	…	…
Switzerland	…	4.20	…	14.71	17.95	+3.24	4:3

… no data available
Source: based on OECD, 2017

Such indicators as the number of hospitals per 1 million in population, hospital beds per 1 thousand in population, and availability of medical equipment were analyzed. In countries with the Bismarck model, the number of hospitals per 1 million inhabitants ranges from 10.2 in Israel to 72.1 in Japan, while in Belgium, Slovenia, and Hungary, this figure ranges from

14 to 17. Research evidence suggests that such a state as the Netherlands, during the study period, significantly increased the number of hospitals. In 2007, the number of hospitals for 1 million in population was 11.6 and rose to 29.94 in 2015. While in Estonia, there is a reverse trend. In 2007 the number of hospitals for 1 million in the population was 41.02 but decreased to 22.81in 2015. Among the countries where the Beveridge model takes place, the most significant number of hospitals is concentrated in Finland (48.91) and the lowest in Spain (16,47).

Exploring the dynamics of the number of hospital beds per 1 thousand population, where the Bismarck model is typical, Japan is the leader. The figure here varies within 13. In other states, in particular in the Czech Republic, Luxembourg, France, Belgium, Poland, Hungary, and Latvia, it is twice less. It should be noted that it is the smallest in Israel -3,03. For states that have the Beveridge model, the number of hospital beds per 1 thousand population varies between 2.53-4.35. Most of the countries selected for research are attempting to reduce the number of hospital beds (except for Poland). As for the form of ownership, there are different trends. In Canada, most hospitals are state-owned. Their share in 2015 was 99%. The largest share of public hospitals is also located in Lithuania – 92.6%, Slovenia – 89.7%, Latvia – 68.7%. At the same time, as in Luxembourg 50%, the Netherlands 32.1%, Germany 31.5%, there are private clinics. Most hospitals in the US are private. Their share in 2015 was 74.7%. In particular, 53.1% are private non-profits, and 21.6% are private. An important indicator characterizing the material resources of health care is the availability of medical equipment. Research materials indicate that the health care service of the United States (41), Latvia (37), Switzerland (36), Germany (35), Austria (29), is equipped with scanners of computer tomography per 1 million population. Table 4 is a compilation of the human resources that provide the functioning of different health care modelsFor countries with the Bismarck model, the number of physicians per 1 thousand population varies from 2.33 in Poland to 5.1 in Austria. In all states, during the period under study, there is a tendency to increase this indicator. It is most significant in Luxembourg. For countries with the Beveridge model, the number of doctors per 1 thousand population varies from 2.79 in the UK to 4.4 in Norway. As for the number of nurses per 1,000 people, their number in countries where the Bismarck model functions vary from 4.68 in Latvia to 13.34 in Germany. In countries such as Israel, Estonia, and the Czech Republic, this indicator tends to decrease. For countries with the Beveridge model, this indicator is the largest in Norway, 17.34, and the smallest in Greece 3.21.

Materials from research indicate that female doctors predominately provide medical services in the Baltic countries. In Estonia, female doctors are 73.1%, Latvia 74.4%, and Lithuania 73%. By examining the average monthly salary of medical staff, in 2015, it was the highest in Luxembourg at $29,778 USD. It is high in Iceland and the United Kingdom, respectively $11,748.7 and $7,349.7 USD. According to the ratio of nurses to doctors in 2015, the leading countries are Iceland (5:4), Denmark, and Finland (4:6), an Switzerland (4:3). The lowest are Norway (1:2), Italy (1:4), and Austria (1:6).

Economic Provision of Health Care in Ukraine

For Ukraine, as well as for all other former republics of the Soviet Union, the model of health protection of Semashko was typical. The financing of health care was carried out exclusively from the state budget. The state's control was exercised through the system of central planning and was characterized by the absence of the private sector.

It should be noted that the health care system of the USSR was one of the few spheres of activity that received positive evaluations of experts from various foreign countries. Many countries have studied the experience of the Soviet model, and the World Health Organization (WHO) has repeatedly recommended the widespread use of its individual elements. Until the beginning of the 1990s, the Semashka system worked efficiently. However, in the years following the existence of such a model of health protection, several negative trends accumulated. Namely:

- The development of medicine was exclusively extensive. The struggle for a

"bed-place" instead of investment in methods of diagnosis and treatment;

- Extensive hospital construction led to inefficient spending of funds, which had an impact on the quality of healthcare services. Some hospitals, especially rayon and villages, did not have the necessary equipment and medicines;
- more and more doctors took a fee from patients, often for the usual treatment, not for improving it;
- the salary of the doctor depended on the specialization, qualification, and degree, but not on the results of the activity.

All this gradually formed a negative attitude towards the national model of health care. The end of the 1990s was characterized by reforms in the field of health protection in Ukraine (1991 proclaimed the independence of Ukraine), which divided the protection of health into two parts. One, paid - for wealthy citizens, and another, free - for the poor. During the years of independence in Ukraine, health care accounted for 2.6-3.3% of GDP. Unlike other industries, health care in Ukraine mostly depended on state budget financing. The development and attraction of different sources of funding were constrained by both the lack of interest in the private sector and the negative attitude of public health authorities in general. One budget financing (and it was only 50-60 % of the required amount) was not enough for the effective interaction of healthcare with other industries that worked under the laws of the market.

Table 5. The General trend of development of healthcare of Ukraine

	2005	2010	2011	2012	2013	2014	2015	2016
The number population million people	46.90	45.80	45.60	45.60	45.40	42.90	42.80	42.60
Total cost for health care, bln UAH	28.40	84.70	95.70	108.90	115.70	117.80	155.20	181.60
Growth total expenditure on health, %	52.50	198.50	12.90	13.80	6.30	1.70	31.80	17.00
The costs of health protection per capita, UAH	605.30	1,850.30	2,099.00	2,391.70	2,548.20	2,743.00	3,630.00	4,264.30
The total cost of health, % of GDP	6.43	7.56	7.09	7.47	7.60	7.42	7.81	7.62

Source: based on Statistics of Ukraine, 2017

*without taking into account the data of the temporarily occupied territory of Ukraine

The beginning of the 2000s was characterized by changes in the field of health, which led to a reduction in the bed fund. At the same time, medical institutions were very rarely closed, i.e., imbalance increased. There was an increase in the share of local budgets, which financed fixed and outpatient clinics as local institutions. According to the structure of the expenditures of local budgets resembled expenses of the state budget: wages 68.2% of their total volume; for medicines – 7.8%; for the nutrition of patients – 4.1%; utilities and energy – 9.5%; equipment

purchase – 3.0%; other expenses – 7.4%. All of the above pointed to the need to mobilize resources from other sources – voluntary insurance and direct payment of medical services.

Since 2014, Ukraine has begun another reform in the health sector. Gradually, the country should move to a health model based on health insurance. Changes are difficult. Among them: The complexity of the procedure for the reorganization of institutions; unpreparedness physicians for increasing the volume of responsibility and burden on employment or self-employment; search for funding alternatives to improve the equipment of medical institutions; and formation of their competitive advantages to attract more patients. The leading indicators of health financing show a growing trend in Table 5.

International experience indicates that the optimal level of health care costs is 8-10% of GDP, and data from EU member states confirm it. In these conditions, in Ukraine, there is a tendency for private financing (household expenses), which in 2016 amounted to 52.8% in Table 6.

Table 6 Allocation of total expenses by a source of funds, %

	2005	2010	2011	2012	2013	2014	2015	2016
State (including government firms)	59.1	56.3	55.3	57.2	56.2	51.7	48.7	44.8
Private firms and corporations	2.8	2.6	2.5	2.4	2.5	2.1	1.6	1.7
Households	37.8	40.8	41.9	40.2	41.1	46.0	49.3	52.8
Donors	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.7

Source: based on Statistics of Ukraine, 2017a

*without taking into account the data of the temporarily occupied territory of Ukraine

According to all indicators characterizing material and personnel support in Ukraine, there is a declining tendency in Table 7.

Table 7. General trends with material and staffing in Ukraine

	2000	2005	2010	2015	2016
The number of doctors per 10,000 population	46.2	47.9	49.3	43.7	44.1
The number of average medical personnel per 10,000 population	110.3	106.2	102.4	87.3	86.5
Number of hospitals, in thousand units	3.3	2.9	2.8	1.8	1.7
The number of hospital beds per 10,000 population	125.1	95.2	94.0	78.1	74.3
The average duration of treatment, days	16.8	14.9	13.5	12.5	11.4

Source: based on Statistics of Ukraine, 2017 b

* without taking into account the data of the temporarily occupied territory of Ukraine

Taking into account the decisions found in existing health care models, the Ukrainian healthcare system is working on the implementation of the following priority areas of development: The autonomy of health care institutions with the transition from budget

institutions to utility non-profit enterprises; the transition to the principle of financing money *goes to the patient*; administrative and financial decentralization; reforming the financing mechanism of the primary care unit, and the formation of hospital districts. Their implementation should ensure success in carrying out the planned reform.

CONCLUSIONS

The studies conducted show that each state, based on its historical, political, social, and economic conditions, has developed its model of health care, which provides for its financial assurance. Choosing a healthcare model is a strategically important task for each state. This importance is further reinforced since the respective country strives to build a system of economic relations that takes into account the needs, possibilities, and awareness of the ever-growing economic and social value of a healthy society.

In modern society, three models of economic provision of health care were formed: private, budgetary, and insurance. A common feature is the use of a multi-source financial resources mechanism. Ukraine (which inherited the budget model Semashko for the health care system) gradually changed the approach of financing the industry. Thus, in 2007, in the structure of sources of financial support, 72% came from borrowed budget funds and 28% from enterprises (insurance) and citizens (private). In 2016, respectively, 45% and 54% (Statistics of Ukraine, 2017a). Currently, Ukraine's healthcare system is at a stage where the reform of the sector includes the introduction of a model of state solidarity health insurance (Concept, 2016). Research materials point to the fact that the insurance model of health care is actively used throughout the world. And the process of reforming the health care system in countries such as Estonia, Latvia, Lithuania, and Russia began precisely with the introduction of compulsory health insurance. It emphasizes its practical value and economic stability. The global experience of economic provision of health care did accumulate over decades documents the high efficiency of various models and compulsory health insurance systems. The fundamental changes that will take place in the course of Ukraine's health care reform should be the basis for increasing its financial stability, availability of medical care, and the quality of medical services.

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