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ИССЛЕДОВАТЕЛЬСКАЯ РАБОТА
«The system of medicine in different countries»

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Introduction

Health care in many countries of the world is one of the priority areas of development, due to its obvious contribution to socio-economic progress. It is well known that health care is successfully developing due to modern achievements of science. Medical systems often reflect the cultural values and norms of the society they serve. Understanding the medical system in other countries can deepen our understanding of different cultures and ways of life.

Medical research and innovation often involve collaboration between healthcare professionals from different countries. Understanding the medical systems in these countries can help to facilitate this collaboration. Studying the medical systems and healthcare policies of other countries can help to identify successful practices that could be implemented in other countries to improve public health. Knowledge of different medical systems can facilitate medical tourism, international cooperation, health policy management and cultural awareness. Qualitative and quantitative analysis of various competitive advantages and disadvantages of the medical industry, requiring special attention from the state, is the basis for the study of global trends in healthcare development.

The objects of the research are possibilities and development of healthcare systems in Belarus, Germany and USA.

The subjects of our work are healthcare systems in Belarus, Germany and USA.

The aim of our research is to find out the level of development of medicine and the quality of treatment in the USA, as well as to compare the medicine of Belarus, America, and Germany.

In order to reach the aim, we have set the objectives:

1. Study the medical situation in the world;
2. Define the types of different medicine systems in the countries concerned;
3. Study the medical system in America, Germany, Belarus, describing the benefits and drawbacks of each country.

Hypothesis:

To prove that hypothesis of the research we used such methods as theoretical analysis to look into the current situation of medicine in countries; to describe the exciting health systems; systematization of the results of practical surveys.

1. Basic part

1.1. Medical situation in the world

All developed countries of the world have been increasing the cost of medicine, including per capita. For example, over the past twenty years, medical expenses in South Korea have increased by more than 5 times. In Poland, Ireland, Norway - more than 4 times; in the Netherlands, Great Britain and Spain - more than 3 times, and in the USA and Germany more than 2.5 times. One of the largest indicators of per capita spending on health care belongs to the United States; in 2022, the cost of medical care for one resident of this country amounted to \$7,960. In the future, according to experts' forecasts, further growth in costs is expected, both in relative and absolute terms. It should also be noted that health care costs in many developed countries are outpacing their economic growth rates. Over the past two decades, the share of spending on health care in countries such as the United States, Japan, Spain, and France has increased by almost 1.5 times. In the United States, the indicator reached the highest level and amounted to 17.6%, in Germany, the share of the country's expenditures over the same period reached 11.6%. One of the key factors in this trend is the aging of the population. [1]

An analysis of retrospective data shows that about a quarter of the annual increase in total health spending is due to the age factor. The increase in the proportion of the elderly population in the country directly affects the cost of medicine, ensuring a constant demand for expensive treatment of chronic diseases in this category of people. Another equally important vector of the global trend in the technological scenario is the gradual transition to preventive medicine. It is well known that prevention requires much less money than the treatment of an already developed disease. At the state level, health care costs can also be reduced by combating the emergence of chronic diseases - that is, their prevention. According to some estimates, about 60–80% of medical expenses are related to the financing of the direct treatment processes. Accordingly, in the United States, for example, about 147 billion US dollars are spent annually on the treatment of chronic diseases caused by overweight, which is about a tenth of all spending on national medicine. Each additional chronic disease of a person increases the cost of providing medical care to such a patient several times.

Improving the methods and means of early diagnosis is a promising direction for optimizing medical costs in this trend. In combination with the methods of early diagnosis in preventive medicine, the tendency to manage a healthy lifestyle of a person and his environment is of particular importance. In this direction, the potential for a long-term reduction in healthcare costs in the trend under consideration is estimated to be quite large. Ensuring the right way of active life, rational nutrition, etc. can significantly reduce the burden on healthcare.

Undoubtedly, the most important trend of this trend is the introduction of personalized medicine, unique methods of treatment and the development of new pharmacological preparations that take into account the characteristics of each organism. Their implementation becomes possible due to scientific progress in the field of genetic engineering. For the economic indicators of health care, this will mean

expanding the classification of the list of diseases, since the individual characteristics of the body of each person will be taken into account.

1.2. The types of different medicine systems

Despite the variety of specific forms of organization of the public health system, the specifics of economic relations in this sphere of society, it is still possible to single out a number of parameters that reflect the commonality of development inherent in different countries. These parameters, expressing the main features of the health care system, its main economic characteristics, include: property relations; methods of financing (obtaining resources); incentive mechanisms for medical workers; forms and methods of monitoring the volume and quality of medical care. Each country historically develops and develops its own way of attracting economic resources for providing medical care, maintaining and strengthening the health of the population. The quantity and quality of resources allocated by society, the effectiveness of their use in the healthcare sector is determined by a complex system of economic, political, moral, ethical and other relations that have historically developed in the country. The presence in a country of an appropriate health care system is determined by many circumstances. It all depends on what underlies the classification of a particular health care system. So, from the point of view of the socio-political structure of society, five types of health care systems are conditionally distinguished:

- 1) classical (unordered),
- 2) pluralistic,
- 3) insurance,
- 4) national,
- 5) socialist.

Economic models of health care systems in different countries can be designated depending on what role and functions the state performs in these processes. Currently, all existing health care systems are reduced to three main economic models. These models do not have unambiguous generally accepted names, but descriptions of their main parameters are given by experts, in general, the same way.

These are:

- paid medicine based on market principles using private health insurance,
- state medicine with a budgetary financing system
- a healthcare system based on the principles of social insurance and market regulation with a multi-channel financing system.

The first model is characterized by the provision of medical care mainly on a paid basis, at the expense of the consumer of medical services, the absence of a unified system of state medical insurance. The main tool for meeting the needs for medical services is the market for medical services. That part of the needs that is not satisfied by the market (low-income strata of the population, pensioners, the unemployed) is taken over by the state through the development and financing of public health care programs. It is most clearly represented by health care in the United States, where the basis of healthcare organization is the private market for medical services, supplemented by state health care programs for the poor «Medicare» and pensioners

«Medicare». Such a model is usually called a paid, market, American, sometimes private insurance system.

The second model is characterized by a significant (exclusive) role of the state. Financing of health care is carried out mainly from the state budget, at the expense of taxes from enterprises and the population. The population of the country receives medical care free of charge (with the exception of a small set of medical services). Thus, the state is the main buyer and supplier of medical care, providing for the satisfaction of most of the public need for health services. The market is assigned a secondary role, as a rule, under the control of the state. This model has existed in Great Britain since 1948. It is also characteristic of Ireland (1971), Denmark (1973), Portugal (1979), Italy (1980), Greece (1983) and Spain (1986). It is called state, budget, state budget.

The third model is defined as a social insurance or a system of regulated health insurance. This healthcare model is based on the principles of a mixed economy, combining the medical services market with a developed system of state regulation and social guarantees, and the availability of medical care for all segments of the population. It is characterized primarily by the presence of compulsory medical insurance for the entire or almost the entire population of the country with a certain participation of the state in financing insurance funds. The state here plays the role of a guarantor in meeting the socially necessary needs of all or most citizens in medical care, regardless of income level, without violating the market principles of payment for medical services. The role of the medical services market is to meet the needs of the population in excess of the guaranteed level, ensuring freedom of choice and sovereignty of consumers. A multi-channel financing system (from the profits of insurance organizations, deductions from salaries, the state budget) creates the necessary flexibility and stability of the financial base of social insurance medicine. Most clearly, this model is represented by the health care of Germany, France, the Netherlands, Austria, Belgium, Holland, Switzerland, Canada and Japan. [2]

Which of the health care models is the most effective: market, state or social insurance? As noted earlier, each of the models has its own advantages and disadvantages. I would like to compare these systems on three examples: the USA (the first model), Belarus (the second model) and Germany (the third model). To make the main ideas clearer you can compare the principles of each system (Appendix 1)

2. Practical part

2.1. The system of medicine in the USA

Most people dream, want and even crave to move to America or to Germany. What is it connected with? About a million new immigrants cross the American border each year. People who leave their home country want to improve their lives: get new career opportunities, increase wealth or find a comfortable place to live. The United States of America is considered to be a country of unlimited possibilities. They believe in “American dream” concept. Millions of people have come here to make their American dream true. Some of them dream of becoming Hollywood actors, others want to live in comfortable houses with a white fence and well-groomed areas. But what is it really, the real America?

Since the USA is one of the largest countries in the world, it is very diverse. America is divided into 50 states and each of them has its own star on the American flag. Each state has its own government and even its own laws, which vary from state to state. But no matter how comfortable and beautiful life in America may seem, people, having moved there, forget about the most important thing, that is, their health. After all, in some states and cities of America they are polluted, at almost every step you can find garbage, for example in New York, the air is polluted by the exhaust gases of cars, which negatively effects on human health. Therefore, people, having moved to America, forget to get acquainted with the services of the medical field. And they will only remember about it when they get sick and need medical help. But what is this system like?

The principle of this system is: “Medical service is a private good, i.e.a commodity that can be bought or sold.” Unlike many other leading countries, the US healthcare system is a privately owned and free market system. In short, this means that hospitals and healthcare facilities are for-profit. It stands in contrast to places like the UK and Canada, where the healthcare system is public and free at point-of-use. Other countries, such as France, have subsidized healthcare systems. Citizens pay something for medical care, but it’s much less than the service costs.

In the US, you typically access healthcare through insurance. Many people get this through their employer or a family member’s employer. You pay a monthly amount for insurance and then pay when you access healthcare services.

Most Americans rely heavily on health insurance, which has led to the supremacy of insurance companies. Health insurance in the USA is mainly distributed by the country’s private sector. However, this means that if you don’t have a job, you typically can’t get medical insurance. [3] We can find some advantages of this system.

High-level. Medical training in the US is held to a very high standard (mainly because there’s so much money involved). The country’s doctors certainly know their stuff, but there’s always a very large bill attached to visiting specialists. The USA has achieved high rates in the field of neurology, transplantology and oncology, heart surgery and plastic surgery, which is why America is one of the countries with highly developed medical tourism. The center is the largest research base that sets the direction in the development of new methods in the treatment of oncological diseases.

Medical equipment is updated every year, so hospitals use the latest technology. Treatment of the population is carried out using the most advanced technologies. Equipment and drugs are constantly updated, taking into account the world's scientific developments and research. And even in small towns, medical institutions are supplied with modern medicines and equipment as much as possible. In addition to the fact that doctors here have a high social status, high salaries and a prestigious education.

World-leading. The USA has many excellent medical research systems. Such health systems also conduct valuable research regarding health technology and drugs. The USA health system is successful for its quick health care delivery systems and economics.

Short-waiting time. A limiting factor in public healthcare is the waiting times. This isn't usually the case in the US due to the number of specialists and the amount it costs to see them.

Plenty of resources. The competitive markets of the health system in the USA increase economic efficiency and improve resources. Granted, some companies have a monopoly on medication, there's at least plenty to go around. The healthcare system in the US might be lacking some things, but medication isn't one of them.

But of course, there are some disadvantages, too:

Economic inequality. The healthcare system in the United States favors companies and the rich over everyday people. It leads to minorities and the unemployed not having insurance. Therefore, they are not capable of getting any medical services. On the other hand, people with high incomes mostly pay their medical fees using pre-tax income. Some wealthy people and firms in the USA get a 'tax break' in order to access different medical services. For example, some companies have to pay health insurance instead of paying the tax for their employees.

Healthcare is expensive. There's no point saying otherwise: the healthcare system in the United States is expensive. It's almost impossible to understand unless you've seen someone's hospital bill. For example, in California, you can expect to pay more than \$3,000 for a single day in hospital. Granted, your insurance covers most of this, but it's still expensive. This is why insurance is a must. Unfortunately, it leads to issues with people who don't have insurance denying necessary procedures. So, if you're moving to the US, make sure you have some medical cover. In the USA, you are unlikely to encounter indifference or neglect on the part of a medical worker. Here much attention is paid to the communication skills of a specialist. It is known that medicine in the US is very expensive, so people buy insurance that costs a lot, but with the help of this insurance, medical services will cost a little less. At the same time, there is a certain myth that poor people in the United States who do not have health insurance almost die on the streets there because they cannot see a doctor. In fact, the government in the United States pays 52% of all medical care costs, so this system cannot be considered completely private, as it is often said to be. (Appendix 2)

There are also pharmacies in the United States where drugs are sold only by prescription, which is written by a doctor, and the cost of drugs is very high. And unfortunately, it is forbidden to import medicines from other countries for their own needs into the territory of America.

Government control of healthcare system. Governments will always be involved in national healthcare. However, in the US, federal involvement is patchy. It accounted for only 47% of the \$2.3 trillion spent on several health care products and services. The rest came from private companies. On the other hand, the government has the power (in theory) to end public insurance services. For example, Trump tried to end Medicare and Medicaid during his presidency, although he didn't succeed.

Overall, the healthcare system in the United States has plenty to offer. Providing you know how to access it, you'll have world-leading services at your disposal.

But the system isn't really designed for the poor, unemployed or minorities. If you're moving to the US for work, always make sure you understand what healthcare options your employer offers, and whether it applies to your family.

2.2. The system of medicine in Germany

Many people also want to live in Germany, because this country has a high standard of living, good ecology, location. Also in Germany, as they say, a fairly high level of education and advanced medical technology. Medicine in Germany is somewhat similar to medicine in our country. For example, assistance should be available to everyone, regardless of their financial condition. Medicine in Germany is famous for the accuracy of diagnostics, modern methods of treatment, the presence in clinics of the latest expensive equipment and technology, effective drugs, as well as well-equipped rehabilitation centers.

I would like to start with the pros of the German healthcare system. It is financed on the principle of solidarity. This means that all those with statutory health insurance bear the costs for the treatment of individual members. Everyone covered by SHI is entitled to medical care, regardless of their income and therefore their health insurance contributions. So, the healthy pay for the sick, the rich for the poor and singles for families.

Medicine in Germany is considered to be the best, priority, highly specialized and modernized. The most important plus of German medicine, as in Belarus, is that not a single person will be left without medical care. Another aspect is that those in work continue to receive their salary if they become ill. Employers pay them their full salary for the first six weeks. Anyone who is off work for longer receives an allowance of 70 percent of their gross pay from their health insurance fund.

Mandatory insurance Statutory health insurance (SHI) and private health insurance (PHI) were made mandatory on 1 April 2007, and as of 1 January 2009 everyone registered or usually resident in Germany is required to take out health insurance. Employees are required to make SHI contributions if their income is below a certain level (in 2020 the threshold was €5,212.50 per month). If their monthly income exceeds this level, employees can retain membership of the SHI on a voluntary basis or elect to take out private health insurance. Some groups are also exempt from mandatory contributions to the SHI regardless of their income level. They include civil servants and the self-employed, for example. [5]

When you receive care under the German healthcare system, then your maximum cost for a hospital stay on the government scheme is only 10€ per day. You

will also pay a maximum yearly out-of-pocket cost for hospital stays of 280€. Members of the state health plan will also pay just 10€ in co-payments for their prescription medicine.

German doctors do not have any rules to follow when it comes to discussing your treatment, prognosis, alternatives, or risks. That means it is up to you to ask questions about the care you are receiving. Most providers will also work with their patients on a first come, first serve basis even if you have an appointment. That means you can get in pretty quickly to see someone if you arrive early in the morning for care, but it also means you might be waiting for some time even though you scheduled a specific time.

If you need to see someone outside of the regular business hours, you can go directly to an emergency room, call the local hospital, or contact an emergency doctor. [6]

It's time to talk about the pros of German healthcare system. When you go to visit a doctor in Germany, you will not receive prescription medication for your problem as quickly as you would in other countries, such as the U.S. In Germany, doctors are said to somewhat freely prescribe simple high-dose painkillers such as ibuprofen, but avoid prescribing antibiotics and addictive painkillers. Instead, they attempt to exhaust other options to treat health concerns.

As of January 2019, the public health insurance costs charged by the Krankenkassen are 14.6% of your monthly income, up to a maximum salary of 4,538€. There is another 0.9% median supplemental premium on top of that. The average monthly premium on the market for the 110 public providers can be up to 720€ per month for some households, which is significantly higher than the costs and insurance that some families in the United States pay. There is also a mandatory nursing care insurance cost that can be up to 150€ per month as well. Employers pay 50% of the healthcare costs in 2019, which means your maximum monthly out-of-pocket is 360€. If you are one of the households that tops out at the maximum premiums for the public scheme, then you will be paying over 10,000€ per year in medical premiums. The only difference to the American system is that you have guaranteed coverage and costs, so it becomes an expense you can budget.

The public health insurance scheme is mandatory unless you make enough income. That means your income dictates how much you pay for a minimum period of at least 18 months with most providers. You do have permission to switch government health fund providers by giving a 60-day notice after 18 months of membership or when supplemental premiums increase.

It is illegal to not carry health insurance if you live in Germany. Germany requires everyone to carry health insurance of some type. If you are in good health, then the government recommends that you try to purchase a suitable benefits plan from a private health insurance company that is willing to except someone from outside of the country. Brokers that specialize in working with expatriates will typically find the best coverage for you. If you decide to hold non-German insurance, then you must still pay into the long-term nursing care fund. You also might want to purchase

supplemental sick pay insurance. If you are self-employed and moving to Germany, it may be next to impossible to find the coverage you need.

There are not enough doctors. Making an appointment is difficult, so you have to wait from two weeks to a couple of months. Waiting times, particularly for specialists, can be quite long. However, this is probably the case in every first-world country with an ageing population.

The pros and cons of the German healthcare system have their benefits and disadvantages for everyone, just as any other system does. What you will find is that the overall costs tend to be lower in Germany when compared to the American system because most costs are covered by the insurance premium. Although that means you don't receive a private doctor, it does mean that everyone in your home receives coverage without an additional charge.

2.3. The system of medicine in Belarus

Medical care in Belarus is one of the cheapest among European countries. The country has a large selection of paid and free clinics. In State clinics of Belarus, you can have a full examination, take tests, confirm or deny the diagnosis.

Each free medical facility has a reception, whose specialists will answer all your questions and help you make an appointment. You can contact the registrar by phone or at the address of the medical clinic. This system is very comfortable, but a lot of Belarusians still prefer paid service. Paid clinics have their own price list for services, but the quality of service cannot be compared with free. Firstly, paid clinics to recruit leading specialists in Belarus, and secondly, each specialist undergoes professional training and systematically improves their knowledge in professional activities.

Free medical care is widespread in Belarus, so each resident is tied to a polyclinic at the place of registration. According to Belarusian legislation, you can receive services not only at the place of registration, but also at the place of residence. It doesn't matter if you rent an apartment or live in a hostel, you must bring your passport and application to access the services of the clinic. Within 1 day, your application should be considered and a decision made.

Each person can get into an unpleasant situation that can become a threat to his life. To receive guarantees for protection in the event of unforeseen circumstances, you must take out medical insurance. With the help of insurance, you will not acquire an accident guarantee, you will minimize the negative consequences of the disease with minimal financial costs. There is voluntary health insurance in Belarus. Every resident of the country can purchase insurance with a flexible approach to pricing. You yourself determine the scheme of cooperation, including the necessary list of services provided. Belarus grants its citizens the right to free medical care. It can be obtained at the local polyclinic. Foreign citizens can use the services of state clinics for an additional fee.

Private clinics provide services to Belarusian and foreign patients, but at different price lists. Services in paid clinics in Belarus are much cheaper than in neighboring countries, so foreigners often choose treatment in Belarus.

The quality of medical care in Belarus is very good. Facts testify to the high quality of the work of Belarusian specialists in the field of medicine. Thus, Belarusian

transplantologists performed the first liver transplant operation for a child in Armenia. This was a real breakthrough for medicine in this country.

Today we can safely say that the quality of service in Belarus claims to be one of the highest in the world. Our country is constantly mentioned in the lists of the best of this organization.

The ambulance service is a team of specialists who are ready to leave around the clock in the event of a patient feeling unwell. You can call an ambulance by dialing 103.

Ambulance tasks include provision of emergency medical care for conditions that threaten the life and health of the patient. EMS doctors will be able to help cases of sudden illnesses, exacerbations of chronic diseases, accidents, injuries and poisoning, complications of pregnancy and childbirth; transportation of patients to a medical facility; participation in the elimination of medical consequences of emergencies.

In Belarus, there is a law according to which medical emergency medical care must be provided to any citizen, regardless of his legal status in the territory of the Republic of Belarus. [7]

The development of all branches of the social and economic sphere in Belarus is a continuous process. The Belarusian healthcare system saw substantial changes in the last few years as well. The structural and organizational foundation of the system has improved as well as the financial mechanisms the system relies on.

The Republic of Belarus is one of the few post-Soviet countries and European countries that have preserved a healthcare system funded by the state budget and adapted it to social and economic conditions.

The guiding principles behind the Belarusian healthcare system for the last ten years have included prevention through encouraging a healthy lifestyle; quality and affordability of medical care, including medications; sanitary and epidemiological wellbeing of the population and its future generations. [7]

In our country, in Belarus, medicine is publicly available, that is, every citizen, regardless of his income and salary, can use healthcare services. Belarus is striving to improve healthcare services, therefore, medical technologies are being modernized, specialists are able to perform rather complex operations, the working conditions of a pharmacy, and more. Foreign patients have a certain interest in treatment in our country. This is primarily due to the high qualification of our specialists, the good equipment that our clinics are equipped with. And the most important criterion, which is always paid attention to, is trust in our Belarusian medicine.

Conclusion

At the heart of each of the considered models of the organization of the healthcare system is a different understanding of what is a product in the healthcare sector. The attitude to a medical service as a private, public or public good determines the role of the state in the health care system, the formation of prices in the medical services market, and the remuneration of people employed in this area.

Based on what I said, we can conclude. In each country, medical services have both pros and cons, and depending on how the financial situation in the country is developed, the development of medicine in this country is at a certain level of development. And if we fairly and objectively consider the level of medicine in three countries considered: the USA, Belarus and Germany, then they occupy the following position. Germany will take the first place, the USA will take the second place and Belarus will take the third place. But in the future, these statistics may change, and, perhaps, among these three countries considered, Belarus may take second place, it all depends on the conditions for the development of the country itself.

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The main principles of different medical models

	Germany	The USA	Belarus
The principle underlying the model	Health is a factor that determines the quality of «human capital». Medical service is the most necessary to maintain health.	Medical service is a private good, i.e.a commodity that can be bought or sold.	Medical service is a public good. The health care system should be controlled by the state

Healthcare cost per capita in the USA



The United States spends more than twice as much per capita on healthcare as the average developed country does

