Ministry of Education and Science of the Republic of Kazakhstan
M. Narikbayev KAZGUU University

«Approved for Defense»
Supervisor _____
_____
«__» _____ 20__

MASTER'S THESIS

«*Fiscal issues of social health insurance implementation in Kazakhstan*»

specialty 7M04124 - «Finance»

Written by Aidana Yerzhanova

Supervisor: Galym Makhmejanov

Nur-Sultan, 2021

M. Narikbayev KAZGUU University

Fiscal issues of social health insurance implementation in Kazakhstan

Aidana Yerzhanova

May 20, 2021

«Approved»
Supervisor: Galym Makhmejanov
Supervisor's Signature _____
«__» _____ 20__

Nur-Sultan, 2021

Abstract of
"Fiscal issues of social health insurance implementation in Kazakhstan"
by Aidana Yerzhanova
HSE KAZGUU University
May, 2021

The aim of implementing new social health insurance system in Kazakhstan is increasing the expenses for one household and decrease the out-of-pocket payments. The importance of out-of-pocket payments is part of the financing system of health care in all countries. However, catastrophically high private spending can lead to financial instability of the entire health system, and national economy as a whole. High level of private service costs health suggests that the population prefers pay for medical services at their own expense. And this means that allocated public funds are not enough effectively used, there is still a shortage accessibility of health services. Also unregulated high health care prices are often an obstacle to access to necessary medical care, and also contributes to growth of pocket payments, causing financial problems protection of the population.

The research methods of dissertation are system analysis, statistical analysis, quantitative analysis, forecasting and PEST analysis.

The first stage was implemented by analyzing all existing approaches to determining the meaning of social health insurance, defining criteria, considering types and factors of health insurance, out-of-pocket payments, healthcare system of Kazakhstan;

The second stage included the diagnostic work and control of statistical information regarding expenses of households on medical care, analyzing of report of Republic center of healthcare development about national accounts of healthcare for 2010-2018 years. All the information regarding government spending and out-of-pocket payments of households were taken from this report. Information about compulsory social health insurance payers, socially vulnerable population of the Republic of Kazakhstan were found on the the official site of Compulsory health insurance Fund, expenditures of Fund's assets, Statistic committee of Republic of Kazakhstan, Taldau.stat.gov.kz, the official site of Ministry of Healthcare of Republic of Kazakhstan, OECD reports.

The problem in this dissertation was identified by using statistical data of out-of-pocket payments, which increases year by year. As the hypothesis of work is implementation of social health insurance decreases the out-of-pocket payments, in the results were made forecast of contributions to compulsory social health insurance, out-of-pocket payments percentage, and the impact of implementing CSHI to the level of out-of-pocket payments.

In the last stage, using the higher tariffs assumption there were made recommended forecasting , as a result in 2023 the percentage of out-of-pocket payments will reach to 20.4%. Recommended tariffs to reach the level of percentage recommended by WHO: government contributions for 15 preferential category – 10%, employer deductions – 10%, employee contributions - 5%, and individual entrepreneurs contribution – 8%.

Content

List of abbreviations

CSHI	Compulsory Social Health Insurance
GFMC	Guaranteed free medical care
CMIF	Compulsory medical insurance Fund
PHC	Primary health care
UNHS	Unified national health system
AIDS	Acquired immunodeficiency syndrome
NJSC	National Joint Stock Company
WHO	World Health Organization
OECD	Organization for Economic Cooperation and Development
PEST	Political, economical, social and technological analysis
MNH RK	Ministry of National Healthcare of the Republic of Kazakhstan
GDP	Gross Domestic Product
SHI	Social health insurance
OOPP	Out-of-pocket payments

List of figures

Introduction

The head of state, in his Address to the people of Kazakhstan, “The Strategy “Kazakhstan-2050" new political course of the established state” set a new strategic goal for the further development of the country - joining the list of 30 most developed countries of the world by 2050[1]. Nation plan “100 concrete steps to implement the five institutional reforms” reveals this strategy and defines the main measures for modernization health care system, among which an introduction of compulsory social health insurance of the population to the Republic of Kazakhstan [2].

The issues of medical insurance have not been sufficiently studied, therefore, its development in our country is fraught with many problems, including a shortage of financial resources allocated to healthcare, issues of the quality of medical care,the rational use of funds and the effect on indicator of private expenses.

Strengthening the social orientation of social development determines the increasing role of healthcare in solving not only purely medical, but also economic problems. The health of the population is an integral part of national wealth and therefore it should be considered as an economic category.

Many aspects of the raised problems of financing health care in the context of developing compulsory health insurance require a deeper study and development of practical recommendations, which makes the topic of this dissertation research relevant.

In this regard, the main objectives of the dissertation are:

- consider the theoretical foundations of compulsory medical insurance, in comparison with other types of insurance, as well as analyze the stages of its formation and developmental features that have a direct impact on improving managerial functions in the health care economy;
- to analyze the main sources of financing health care, determine the importance of compulsory health insurance funds;

- to identify the main fiscal issues of implementing the social health insurance in Kazakhstan;
- to identify the impact of implementation of compulsory social health insurance on out-of-pocket payments indicator;
- to consider other OECD countries healthcare financing system;
- make a recommendations for optimizing healthcare financing system and for decreasing the level of out-of-pocket payments.

The object of study is the healthcare system of the Republic of Kazakhstan.

The subject of the study is financing of the health care system in the context of changes after the introduction of compulsory social health insurance, the activities of the health insurance fund of the Republic of Kazakhstan, the determinants of healthcare expenses.

Hypothesis of this research: The social health insurance system decreases the level of out-of-pocket payments.

The main questions of dissertation: How the new system of health care financing does work after implementation in Kazakhstan? What kind of fiscal issues exist in implementation of social health insurance system in Kazakhstan?

Methodology and literature review. In this dissertation were used the works of L.G.Skamai (2010), G.Evans (2002), Adam Wagstaff (2007), which considered the meanings of social health insurance and financing health care system. More so, the theoretical part of the work and effective system of social health insurance were illustrated in the work of Kazakhstan authors: A.K.Turgambayeva, L.S.Yermukhanova(2017), G.T Saparova (2017), A.M.Kurmanov (2016). The financial issues were addressed by G.K.Sarybayeva, G.Zh.Kapanova(2019), R.Zh. Bekova, A.E. Rakhimbekova, I.D. Saudambekova, M.K. Zhamkeyeva, G.Zh. Doskeyeva(2018), M.S. Zakirova, A.A. Kussainova, K.K. Dzhaparova(2020).

One of the reason of implementing the social health insurance is the high percentage of out-of-pocket payments in Kazakhstan.

The problem of high degree of private funding level were considered in works of J.Okoroh, S.Essoun, H.Harris, J.Weissman, R.Riviello (2018), Muratbek D (2018), Omirbaeva B.S.(2018). The works of above-mentioned authors are aimed at studying the problems of implementing new compulsory social insurance in Kazakhstan and their solutions.

The research methods of dissertation are system analysis, statistical analysis, quantitative analysis, forecasting. The empirical base of the dissertation research was compiled by official statistics, regulatory acts of Kazakhstan, documents of Compulsory medical insurance Fund, reports of Republic center of healthcare developments, OECD official site, MNH of RK.

During the search, there were found problems with information about amount of payment each of category of payers, the expenditures of Fund's money, not updated information, discrepancy of information.

The main results of this dissertation: the main goal of implementing social health insurance is total coverage of healthcare costs, not by out-of-pocket payments of households. According to analysis of healthcare financing, including government spending and out-of-pocket payments, and forecasting of contributions to CSHI and the level of out-of-pocket payments, the hypothesis of dissertation was approved with the help of implementing compulsory social health insurance system.

Chapter 1. Healthcare system of Kazakhstan

1.1. Literature review and theoretical framework

The meanings of social health insurance and financing health care system were considered by foreign authors L.G.Skamai (2010), G.Evans (2002), Adam Wagstaff (2007). In the book of Adam Wagstaff "Social Health Insurance Reexamined" – Many countries which mostly relied on tax funding and out-of-pocket payments, have implemented SHI. The work also claims that SHI may have negative impacts on the labor market, such as formal workers can move to informal sector, because of contribution rates[3]. L.G. Skamai divides social health insurance into voluntary and compulsory types. Compulsory health insurance is an integral part of state social insurance and provides all citizens with equal opportunities to receive medical care from their contributions to compulsory health insurance. Voluntary health insurance provides citizens with additional medical care beyond those established by compulsory health insurance programs[4]. Robert G.Evans represents the modern system of health care should not consider out-of-pocket payments. The discrepancy between out-of-pocket payments and health needs - usually requires that individual care costs have to be paid by group contributions. In fact, they can be: from large families and public associations to the state, or through commercial and social insurance programs at the regional level. However, in practice, the scale and radical restrictions of some insurance markets have led to the dominance of government agencies. In almost all industrialized countries, most health care is paid by governments by various forms of taxation or social security institutions, completely outside the commercial market, which enforces compulsory payments on the whole or most of the population. [5].

The theoretical part of the work and effective system of social health insurance were illustrated in the work of Kazakhstan authors: A.K.Turgambayeva, L.S.Yermukhanova(2017), G.T Saparova (2017), A.M.Kurmanov (2016).

According to A.K.Turgambayeva, L.S.Yermukhanova "International experience of the insurance in medicine: features of leading world countries", this article indicates that in the world practice the healthcare system has different financing methods, such as: 1) the budget model - financed from general taxation, the countries that practice - Australia, Canada, the UK etc. 2) social health insurance - this is due to compulsory joint contributions of the state, employers and employee; 3) private health insurance - funded by voluntary contributions from employers or employees; 4) health care savings accounts - works exclusively at the expense of the income of working citizens. World practice shows that the SHI system provides medical care to the population completely. Countries such as Estonia, Hungary, the Czech Republic were able to achieve such indicators with health financing in the range of 5-8% of GDP[6]. In this article, the authors approve the dissertation hypothesis.

A.M. Kurmanov considered the effective functioning of the social health insurance system. It depends on these factors: first of all, the level of coverage of the economically active population; secondly, the amount of contributions accumulated in the State Social Insurance Fund; third investing assets of Fund - the effective way to generate investment income. The third factor is not effective way to functioning in the countries where the process of compulsory social insurance at the beginning stage, like in Kazakhstan[7].

In the G. T. Saparova compulsory medical insurance is a certain legislatively fixed list of guaranteed medical services received free of charge, while the consumer, excluding socially unprotected segments of the population is held responsible for irregular contributions for complimentary services[8].

The financial issues were addressed by G.K.Sarybayeva, G.Zh.Kapanova(2019), R.Zh. Bekova, A.E. Rakhimbekova, I.D. Saudambekova, M.K. Zhamkeyeva, G.Zh. Doskeyeva(2018), M.S. Zakirova, A.A. Kussainova, K.K. Dzhaparova(2020).The works of above-mentioned authors are aimed at studying the problems of implementing new compulsory social insurance in Kazakhstan and their solutions. They presented problems regarding the coverage of economically active population, instability of payments, lack of awareness of self-employed workers. In the work of G.K.Sarybayeva, G.Zh.Kapanova were considered self-employed population on the example of the city of Nur-Sultan, their awareness and opinion regarding the introduction of compulsory health insurance. The self-employed are considered separately in the current issue, because the success of the CSHI depends on the degree of citizens' participation in it and from the point of view of involvement, self-employed must independently contribute to the CSHI Fund, which shows the financial problems of introducing insurance[9].

One of the reason of implementing the social health insurance is the high percentage of private funding (out-of-pocket money) in Kazakhstan. The problem of high degree of private funding level were considered in works of J.Okoroh, S.Essoun, H.Harris, J.Weissman, R.Riviello (2018), Muratbek D (2018), Omirbaeva B.S.(2018). The study of Muratbek D. (2018) “Determinants of Healthcare expenses in Kazakhstan” examines the effects of income and various demographic, social and medical factors on household out-of-pocket spending on health in Kazakhstan, both in urban and rural[10]. The econometric analysis used in the work supposes that income along with age characteristics of the households have a substantial influence on healthcare spending. According to the J.Okoroh, S.Essoun, H.Harris, J.Weissman, R.Riviello (2018), it is estimated that approximately 150 million people each year suffers from a financial disaster, spending more than 40% of their non-food expenditures on healthcare system, and

100 million people are below the poverty line due to out-of-pocket payments. In fact, 5.6 billion people in low and middle-income countries depends on out-of-pocket payments to cover more than 50% of their healthcare expenses[11].

Thus, this literature review shows that in Kazakhstan, the introduction of social health insurance is at the initial stage, there are missing factors, elements, problems that can be corrected using effective management methods.

1.2. Healthcare system of Kazakhstan after independence 1991-2020

After independence in 1991, Kazakhstan inherited the Soviet a health care model characterized by government regulation and centralized planning as well as a deformed delivery structure of medical care, which was mainly focused on inpatient treatment, and the primary health care (PHC), but prevention diseases and the formation of a healthy lifestyle received little attention.

For the entire health system, there was a tendency to refer patients to higher levels of care. So, with having independence, Kazakhstan faced with problems of maintaining massive and unprofitable health care system, focused mainly on provision of inpatient care.

Over the years of independence, the healthcare system in Kazakhstan has experienced a number of transformations.

At the first stage (1992–1994), the reform was associated with a reduction in budget expenditures for the maintenance of the social sphere, and the transfer of social facilities to the subordination of local authorities. This stage is characterized by the creation of a legislative framework and serves as regulatory support for the differentiation of powers of authorities at various levels[12].

The second stage (1995-1997) was associated with the beginning of social reforms[12].

The next stage (1998-1999) - with the need to form a mechanism for new relationships between central and local executive bodies. Central executive bodies provided local executive bodies with the necessary regulatory and instructive information, held seminars and meetings with their employees, strengthened control for the execution of government decrees State funds health care were aimed at providing medical care to the population, development of the material and technical base, the maintenance of medical and preventive and sanitary-epidemiological institutions, the training and professional development of medical personnel, the development and implementation of medical science, the elimination of epidemics of infectious diseases in accordance with adopted by targeted health programs[12].

In period 2000-2005 was predetermined by the formation of health policy in the context of economic growth, the strengthening of the regional level in solving health problems, the role of local budgets. In conditions social crisis and limited financial resources the main task state health was to stop the process of degradation of the health sector and to preserve the structure of the health system from further destruction. For the period of the implementation of the State Reform Program and Health Development of the Republic of Kazakhstan for 2005–2010 [13] were certain results achieved: the Code of the Republic of Kazakhstan adopted “On the health of the people and the healthcare system”[14]; set minimum standards for the guaranteed volume of free medical care; sectoral programs to reduce maternal and child mortality in 2008–2010, measures to improve blood services in the country for 2008–2010, measures to counter the epidemic AIDS in the Republic of Kazakhstan for 2006–2010, measures to develop cardiological and cardiosurgical care for 2007–2009 and program for the formation of a healthy lifestyle for 2008–2016.

The consequence of this was the formation of a sanitary border protection system.

Since January 1, 2010, the Unified National System has been introduced in the republic healthcare, in order to provide inpatient and inpatient replacement medical care, which necessitated the consolidation of the budget at the regional and then at the republican level. At the same time, work began on the training of healthcare managers[15].

As a result, it was decided to create a unified national health system (UNHS) with the centralization of the state health budget at national level. The objectives of the UNHS include: improving the provision of inpatient assistance based on the patient's free choice; development of a competitive environment among health care providers, improving the quality of health services. Market relationships in healthcare have opened up prospects for the development of competitive medical organizations.

Free choice of a doctor and a medical organization, implemented on an inpatient basis level in 2010, allowed to create a competitive environment among hospitals, achieve transparency in the provision of medical services and financing of medical organizations for the final result. It is important that hospital managers have acquired vast experience in adapting to modern requirements and market conditions. It stimulates the efficient use of resources and improving the quality of management.

However, further improvement of the UNHS is impossible without the development of a socially-oriented model of primary health care based on general practice.

World experience shows that all successful health systems have achieved high performance and public health due to:

- Strengthening primary health care with a focus on the education system general medical and nursing general practice;
- development of socially-oriented (patient-oriented) PHC models;

- joint and several liability of the person, family, community, employer, private and public organizations, the state system for prevention and protection health;
- rational, efficient use and distribution of financial resources between primary and secondary levels of honey iqing aid when no less 60% of the resources go to the primary level;
- integrated medical, social and psychological assistance to primary health care level[12].

Despite some success with health reforms, key aspects of the functioning of the healthcare system of the Republic of Kazakhstan require further major improvement.

The strategy “Third Modernization of Kazakhstan: Global Competitiveness” ensured the accelerated implementation of the Third Modernization of the Economy. Necessary create a new model of economic growth that will ensure global competitiveness of the country [16].

Currently, Kazakhstan is experiencing a new stage in the development of an economy in general, and health care: our country moved to a new model of health care - compulsory social health insurance.

1.3. The implementation of social health insurance in Kazakhstan

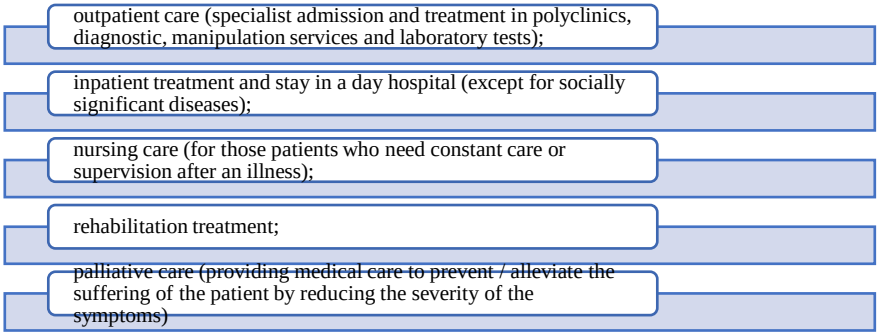
Social health insurance is divided into two main forms of compulsory and voluntary insurance. At the same time, the scope of compulsory insurance is clearly regulated in normative legal acts, rules on objects and insurance rates are fixed. The law of the Republic of Kazakhstan gives the following concept to compulsory health insurance: “Compulsory social health insurance is a set of legal, economic and organizational measures to provide medical care to consumers of medical services from the assets of the social health insurance fund” [17].

Compulsory social health insurance is a procedure that allows, through regular financial contributions, to form the assets that will pay for the received medical care. The population of the Republic of Kazakhstan will be able not only to receive medical services at the expense of the contributions made, but also to independently choose healthcare organizations in which it is more convenient to observe and receive help.

The introduction is approved by the Law “Compulsory Health Insurance” 405-V, which was enforced on November 16, 2015. The basis for its development was the Code of the Republic of Kazakhstan “The health of the people and the healthcare system” [17].

Insurance medicine has been introduced in many developed countries of the world in order to reduce the financial risks of the population associated with unforeseen expenses for the treatment of serious diseases, as well as reduce the pocket payments of citizens for paid medicine, and thereby decline the impoverishment of citizens. First of all, the reasons for the implementation of the CSHI system are: lack of adequate funding for the guaranteed volume of medical care; a form of social protection of the population from high health costs (WHO); ensuring the joint responsibility of the population for their health.

Figure 1. The insurance package will include[18]:



All emergency medical services will remain in the guaranteed free package:

- primary health care (outpatient care);
- ambulance and air ambulance;
- emergency inpatient care;
- palliative care.

Patients with socially significant, major chronic and socially dangerous diseases (according to the approved list) will receive full access to the insurance package, regardless of participation in the CSHI system[18].

More so, there are 15 list of preferential categories of citizens who are exempt from payment and for them, contributions to the Health Insurance Fund will be made by the state:

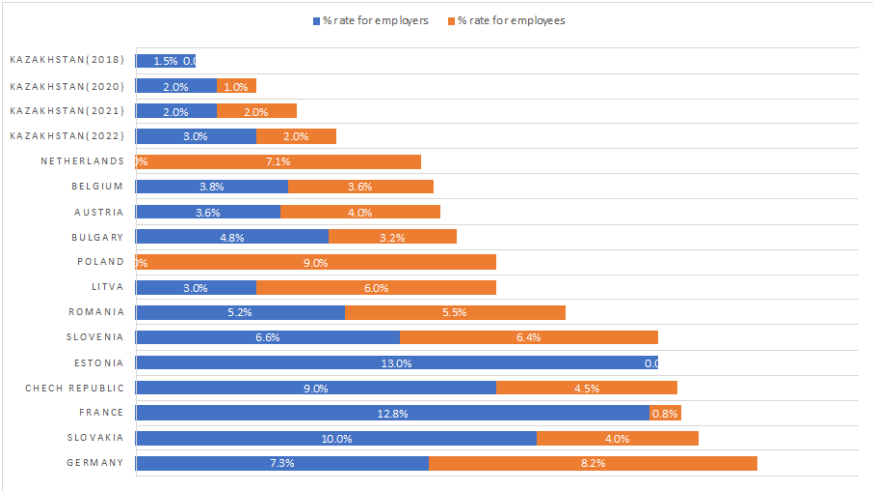
- Children;
- Persons on leave in connection with the birth of a child, adoption of a newborn child, childcare until they reach the age of 3 years;
- Recipients of pension payments, including participants and disabled people of the Second World War;
- Mothers with many children, awarded with pendants “Altyn alka”, “Kumys alka” or who received the title “Mother Heroine” earlier, and also awarded with orders “Mother Glory” of I and II degrees;
- Disabled people;
- Persons studying full-time in organizations of secondary, technical and vocational, post-secondary, higher education, as well as postgraduate education;
- Military personnel;
- Employees of special state bodies;
- Law enforcement officers.[19]

An important part is also fulfilled by CSHI tariffs, since in our country CSHI started operating in 2020 - tariffs are maximum 5%.

But here many factors are taken into account: the economic situation, the country's budget, etc.

In Figure 2, it is shown CSHI tariffs for employers and workers by country including Kazakhstan.

Figure 2. The tariffs for employers and employees by countries including Kazakhstan for 2020[20].



In the figure below illustrates the categories of payers of CSHI with the proper rate. It is obviously seen in table, that there are different start dates for payment for every category of payers.

Figure 3. Information of tariffs for per category of payers in Kazakhstan, 2020 year[20]

Category of payers	Tariffs %	Start of payment
Government for 15 category of population	1.4%-2%	1/1/20
Employers for employees	1%-3% from the salary	1/7/17

Employees	1%, 2% from salary	1/1/20
Individual entrepreneurs	5% from 1,4*MWI	1/1/20
Self payers	5% from MWI	1/1/20

Health insurance should solve the following problems:

- Make medical care available. Funds from the social insurance fund will allow you to pay for treatment or a simple examination to each payer of contributions, regardless of the size of personal contributions;
- Give the right to choose. A person paying regular payments can independently choose the hospital where he will be served. Registration and place of residence on this procedure will not have an effect;
- Improving the quality of the services provided. Choice gives rise to healthy competition. Medical institutions will fight for customers, which means to improve the quality of service and treatment; Formation of a common electronic base. The medical history is transferred from paper to electronic form. All data is automatically entered into the personal account of the insured, which simplifies the reception. For assistance, it is enough to present a passport;
- The ability to control medical facilities providing services to the insured. Not all organizations will be included in the CSHI system. If there are complaints, they may be excluded from the program;
- Availability of drugs with a 100% discount. Pharmacies will also be included in the overall system. In such departments you can get any free drug approved by a special list[21].

Compulsory insurance benefits not only beneficiaries of medical services, but the whole country. Stability in obtaining qualified

medical care allows you to feel more secure, and increase the overall social significance of society.

Payers of contributions and deductions from 2020, all residents of Kazakhstan will be required to pay taxes on CSHI. In 2020, only employers will pay for health insurance for employees. This type of payment is called deductions. If the amounts are paid by individual entrepreneurs or self-employed citizens, they are called contributions. The essence of the payment and its purpose does not change from this. All residents of the Republic of Kazakhstan will have to pay monthly deductions and contributions.

The obligation to calculate and make payments rests with:

- Employers, if the employee is officially employed;
- Individual entrepreneurs, individuals or who does not work at all without valid reasons;
- Citizens belonging to the categories of self-employed.
- The state, for socially vulnerable groups of the population.

Employers for their employees make monthly contributions starting from 2017. From 2020, the following categories will be required to calculate and pay deductions on a regular basis:

- Individual entrepreneurs;
- Individuals carrying out their activities under civil law contracts.
- Private practitioners - notaries, lawyers, mediators, etc.

Contributions and deductions are paid for all persons living in the Republic of Kazakhstan and even for those who have left the country, provided that the traveler did not apply for permanent residence in another state.

The main government agent who assist the activity of CSHI is NJSC "CMIF" provides a full range of services for the accumulation of contributions, the purchase of medical services from healthcare entities within the framework of the guaranteed volume of medical care and in the system of compulsory medical insurance. The fund has an extensive branch network in the country, consisting of 16 branches. The network covers the entire territory of the Republic of Kazakhstan.

In 2017, the Fund achieved some success in achieving the strategic goals set in the previous Strategy. However, in connection with the postponement of the full implementation of CSHI for 2020, and the resulting regulatory changes, it is necessary to adapt the development strategy of the Fund to maximize the use of opportunities and advantages[22].

The Fund, as a single purchaser of medical services, provides a full cycle of services within the framework of the guaranteed volume of free medical care and in the CHSI system. The Fund provides services for the accumulation of funds, the formation of a long-term plan for the procurement of medical care, the selection of providers of medical services, the conclusion of contracts with providers, monitoring the volume and quality of medical services provided to the population and payment to providers for the medical services provided at the rates determined by the Regulator[22].

The total budget allocated for the purchase of medical services within the framework of the guaranteed volume of medical care for 2018 amounted to 946 billion tenge. The funds are intended for the purchase of services from healthcare entities within the framework of the guaranteed volume of medical care. The Fund purchases services at the expense of the funds provided for in the state assignment [22].

In implementing the development strategy for 2017-2021, the Fund has taken a number of steps aimed at achieving its long-term strategic goals. These steps ensured the formation of a favorable regulatory environment, laid the foundations for the modernization of processes for the effective management of own funds and the further development of the Fund as a strategic purchaser of medical services.

The most important direction in the formation of the Fund was its active participation in the development of the legislative framework on CSHI. Development of draft regulatory legal acts, as well as subsequent coordination were accompanied in close

cooperation with the Regulator as part of the implementation of the Roadmap for the implementation of CSHI.

At the same time, it should be noted that participation in the development of the legislative framework on the regulation of CSHI took place in two stages. As a result of the first stage, a package of legislative acts was adopted, which provided for the beginning of the functioning of the CSHI system from 2018. The result of the second stage was the adoption of the law and the regulatory framework, providing for the transfer of the full implementation of CSHI to 2020[22].

According to the PEST analysis of CSHI system and activity of Compulsory health insurance Fund (Appendix 3), there were found negative sides of each factor. For instance, for political factor the negative side is excessive government regulation that impedes the implementation of private initiative. The current regulatory legal acts regulating the mandatory nature of the staffing, office space limits the autonomy of state and the efficiency of private medical organizations, prevent the formation of optimal tariffs and help maintain excess costs; for technological factor is Inadequate level of development of IT systems. The immaturity or absence of such components of the information system as detailed accounting of certain categories of consumers of medical services, administration of refunds of erroneous payments to the Fund, planning the need for medical care, automated assessment of suppliers' performance, personalized accounting of medical services consumption, etc. limit the effectiveness of the Fund.

The latest current news on CSHI in Kazakhstan.

In connection with the announcement of the state of emergency in the country, President Kassym-Zhomart Tokayev ordered to extend from April 1 to July 1 the right of uninsured citizens to receive medical care in the system of compulsory social health insurance (CSHI). During this period, Kazakhstanis will be served in medical facilities in full, regardless of their status in the CSHI

system. The President announced this on March 31, 2020 during his speech on television.

Previously, before the spread of coronavirus infection was planned from April 1, 2020, those who did not become a member of the CSHI system will be able to receive medical services only within the guaranteed volume of free medical care[23].

Chapter 2. Analysis of healthcare funding in Kazakhstan

2.1 Government spending on healthcare system

A study of international experience shows that several models of health care financing have developed, including the state health care system, the private health insurance system (paid medicine based on market principles using private health insurance), and the state (regulated) health insurance.

Under the first model (state budget), the whole process is under state control. The source of financing medical services is mainly the state budget due to taxes from enterprises and the population. The main buyer and provider of medical care is the state, ensuring the satisfaction of most of the public need for medical services. This model is common in the UK, Ireland, Denmark, Portugal, Italy, Greece and Spain.

The second model assumes that the main tool for meeting the needs of health services is the medical services market. Medical assistance to consumers of medical services is provided for a fee. The state assumes the provision of low-income segments of the population, pensioners, and the unemployed by developing and financing public health care programs. Such a system operates in the United States, where the private health care market is supplemented by state-owned “Medicare” and retirement plans for “Medicare”[24].

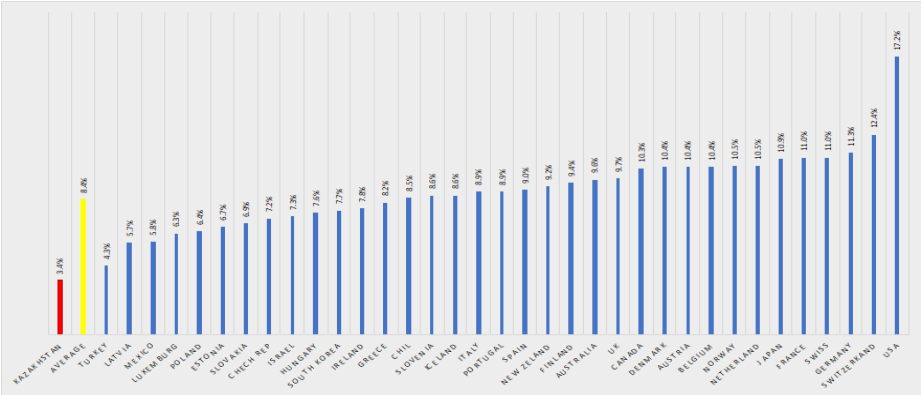
The third model is based on the principles of social insurance and market regulation with a multi-channel financing system. It is defined as a system of regulated health insurance and combines the market for medical services with a developed system of state regulation and social guarantees, access to medical care for all segments of the population. Here there is compulsory medical insurance for almost the entire population of the country with a certain participation of the state in the financing of insurance funds. The state serves as a guarantee of meeting the socially necessary needs of all or most citizens for medical care, regardless of income

level, without violating market principles for paying for medical services. The object of attention of the medical services market is the satisfaction of the needs of the population in excess of the guaranteed level, providing freedom of choice and consumer sovereignty[24].

It is important to take into account that in almost no country in the world do these health systems operate in private. In particular, looking at the state of the state, mixed options apply. In Kazakhstan, the health care system was funded through government and social insurance

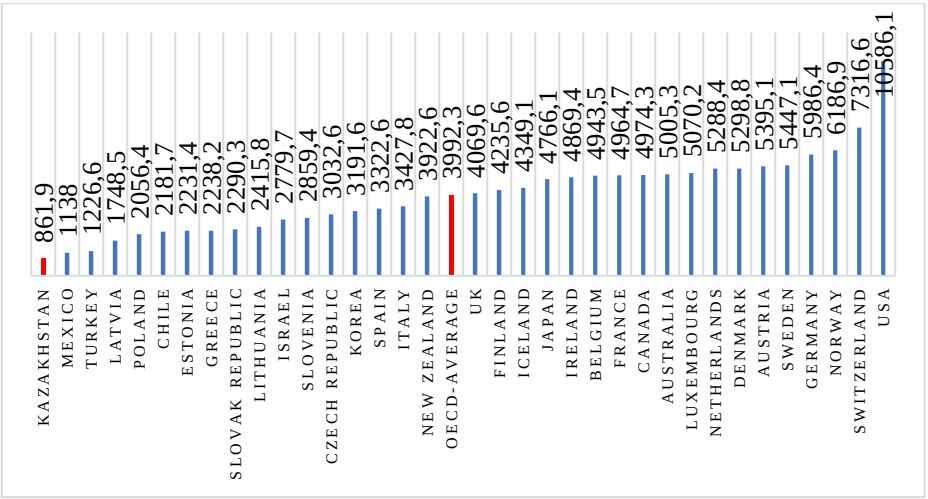
Global challenges to the health system, such as disease growth, an increase in the number of older people, will lead to increased health costs in the future. In accordance to the graphic 1, the level of financing of health care in Kazakhstan is extremely low - at the level of 3.5% of GDP, compared with the Russian Federation (more than 5% of GDP) and the OECD countries (Organization for Economic Cooperation and Development - 35 countries), an average of 8-9% of GDP. More so, according to the recommendations of the World Health Organization, the level of financing for health should be at least 5% of GDP.

Figure 4. Percentage of health financing of GDP by OECD countries in 2017[25]



Health expenditure per capita in 2018 amounted to 95,986 tenge or 278.5 US dollars. For correct comparability of values of indicators of health expenditures with the rest of the world needs to convert them into dollars. Per capita operating expenses in Kazakhstan amounted to 861.9 US dollars. The value of this indicator is below the level of per capita more than 4 times in spending in OECD countries ($ 3,992.3).

Figure 5. Health expenditure per capita by OECD countries in 2018, billion tenge



According to the Figure 6, in 2019 amounted to 1 trillion 039 billion tenge, there was an increase comparing with 2018 year, by 113 billion tenge. In 2018 926 billion tenge was spent on healthcare in Kazakhstan. In accordance Appendix 2, with the implementation of CSHI the total current expenses on healthcare will increase. As the compulsory social health insurance started to work in 2020, the healthcare cost for 2020 was forecasted. The guaranteed free medical care cost will be 988 billion tenge.

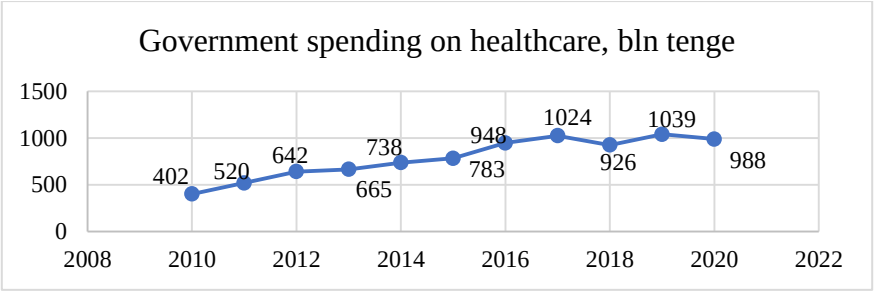
From the implementation of compulsory social health insurance in Kazakhstan, government took responsibility to cover contributions for 15 preferential categories of households. In accordance to Appendix 1, the number of people which under the list of 15 preferential categories amounted 10.6 million people.

Government spending on health in 2017 amounted to 1 trillion. 024 billion tenge or 1.9% of GDP. A similar average among OECD countries in 2017 amounted to 6.3% of GDP. Public spending on healthcare per capita in Kazakhstan amounted to 56,389 tenge.

In terms of levels of the state budget, 66% of expenses were incurred by state bodies at the republican level, 34% - at the local level (including transfers from the republican level - 28%). Total expenditures of state bodies of the health care system (Ministry of Health of the Republic of Kazakhstan and health departments of oblasts and cities of republican significance) amounted to 963 billion tenge, or 1.8% of GDP.

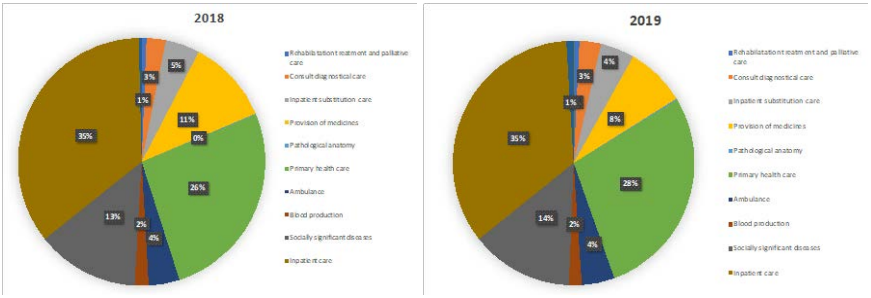
Government spending in 2017 (1 trillion. 024 billion tenge) increased by 8% compared to the previous year (948 billion tenge) and 2.5 times as compared to 2010 in nominal terms. In real terms, given inflation, growth in 2017 is only 0.8% compared to the previous year. Percentages of government spending on GDP in 2010 - 2017 fluctuated around a value of 1.8-2.1%. After growth in 2012, this indicator reached a value of 1.8% in 2013 and rose to a value of 2.0% by 2016, decreasing to 1.9% in 2017 year[26].

Figure 6. Government spending on healthcare, billion tenge[26]



Below Figure 7 illustrates the structure of government spending, exactly the determinants of guaranteed free medical care for 2018 and 2019. In the structure of government spending in 2018 on health care contains of these factors: 35% are inpatient care, 26% are primary health care, 13% socially significant diseases and 11% are provision of medicines. In 2019, there was a slight difference comparing with 2018 year. The structure of total expenses includes: 35% are inpatient care, 28% are primary health care, 14% socially significant diseases and 8% are provision of medicines.

Figure 7. The structure of government spending (GFMC) of Kazakhstan in 2018-2019[26]

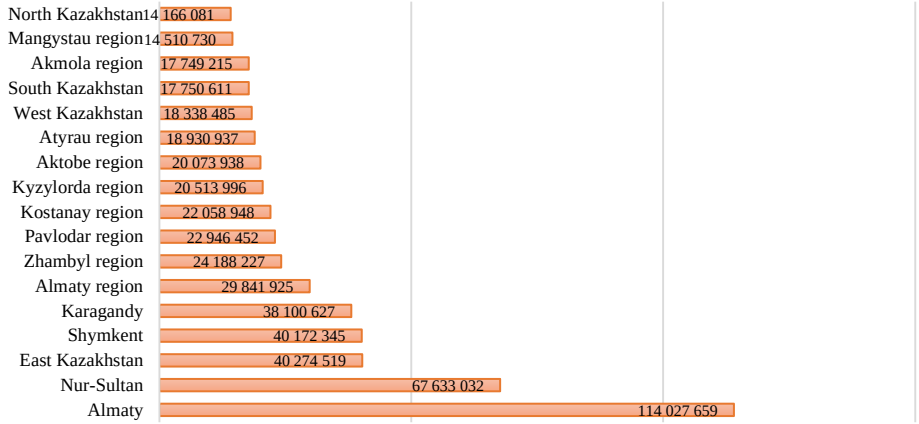


With regard to the distribution of health expenditures at the regional level, in 2017, current expenditures at the level of the local budget for health decreased significantly compared to 2016. Expenditures by region increased in 2018 compared to 2017. This is due to the transition of some budget programs to the republican level. More so, if in 2016 the total expenditures of the local budget amounted to 653.7 billion tenge, then in 2017 amounted to 307.6 billion tenge. The largest volume of expenses was shown by Almaty (114 billion tenge) and Nur-Sultan (67.6 billion tenge). This phenomenon can be explained by the location of most medical organizations of the republican level that provide services to both

local residents and residents of other regions. The smallest indicator is noted in the North Kazakhstan region - 14.2 billion tenge. The structure of current expenses for health care by source of funding has also not changed over the past year. Most public funds were accumulated in the South Kazakhstan region.

Meanwhile, in the city of Almaty, private spending prevails, which makes up 56.3% of all spending, and government spending in this region shows the lowest rate in the country. The city of Nur-Sultan also remained the leader in the expenditure of healthcare enterprises, where this indicator amounted to 30.9% of all healthcare expenditures in the region and increased by 18.7% compared to the previous year. The largest private expenses in these cities are attributed to the levels of real incomes of the population. Also, the proportion of enterprises' funds in the structure of health care expenditures is high in the western regions of the Republic of Kazakhstan. This is due to the location of most large enterprises with foreign capital in the western regions and in cities of republican significance.

Figure 8. Healthcare spending by regions of Kazakhstan in 2017 year[26]



2.2 Determinants of household out-of-pocket payments on healthcare

The introduction of a new model in the health care system, or rather, the social insurance, is accompanied by high costs. That's why monitoring health spending indicators is an important element in decision making. One of the objects of close attention at present time are the high private costs observed in Kazakhstan. They pose a threat accessibility of health services, increase inequality in the level of health services and, accordingly, impose an additional burden on the poorest sections of society. It's connected with the need for expensive treatment, with the ensuing consequences for economic growth. A significant limitation of free medical care or insufficient public funding leads to an increase in the share of out-of-pocket payments as a result of the compelled population to obtain the necessary assistance at the expense of personal funds. On the other hand, with increasing state funding, the expenditures from personal funds of the population may increase due to related expenses not covered by public health (for example, the purchase of medicines), which may explain high level of out-of-pocket payments in healthcare of the Republic of Kazakhstan. In these problems, it is important to recognize the relationship between public and private health spending, which in particular varies greatly between countries. For example, among OECD countries, the lowest share of private spending in 2017 was observed in Norway: 14.8% of all health care spending, while in the United States more than half (51.7%) of all spending is private. According to WHO, the most optimal share of out-of-pocket payments should not exceed 20% of the current share of spending. In this dissertation, the share of out-of-pocket payments of residents on healthcare will be described in detail.

It should be noted that, according to the international classification, total health care costs include current health care costs and gross capital formation expenditures.

Gross capital formation is the total value of assets acquired by suppliers medical services and used regularly or for one year or longer to provide medical services [28].

Current healthcare costs are the final consumer expenditures of residents for health goods and services. In other words, ongoing healthcare costs includes economic resources spent on healthcare functions (treatment services, medicines, etc.) [28].

Therefore, recurring healthcare costs imply final consumption, representing the need of households, the state and non-profit organizations for health products and services, while gross capital formation implies the need health care providers in capital goods. State financing schemes are determined by law and a separate budget is established. Government funding schemes do not always fully cover the cost of goods and services. Often, full costs are covered along with out-of-pocket financing costs.

Out-of-pocket payments - are any direct expenses of household expenses, including gratuitous payments and in-kind payments to medical workers, suppliers of pharmaceuticals, medicines and other goods and services, the main purpose of which is to help restore or improve the health status of individuals or groups of the population [28].

Thus, Out-of-pocket payments depend on the solvency of the population. If health financing is becoming increasingly dependent on cash payments, then theoretically the burden costs are passed on to those who use the services more. In practice, many countries have policies aimed at protecting certain population groups from excessive out-of-pocket payments. Protection programs include partial or full payment of medical care to certain categories, such as like older people or people with chronic illnesses or disabilities, etc.

In some countries, the burden of spending out of pocket may create barriers to access to care. Households having difficulty paying medical bills may put off or even abandon the necessary medical

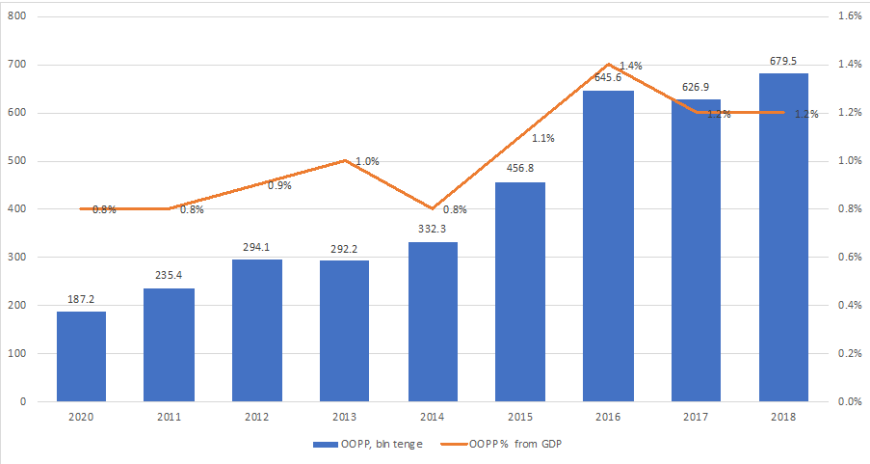
help.

The relation between social health insurance and out-of-pocket payments is that with the help of social health insurance the percentage of out-of-pocket payments decreases. The main financial issue in implementing social health insurance is to solve the high percentage of out-of-pocket payments on healthcare

Private health care costs are voluntary character, and include out-of-pocket payments of the population on healthcare, voluntary health insurance costs and enterprise financing[29].

Out-of-pocket payments in 2018 amounted to 679.5 billion tenge or 1.2% GDP and 38.5% of current health care spending.

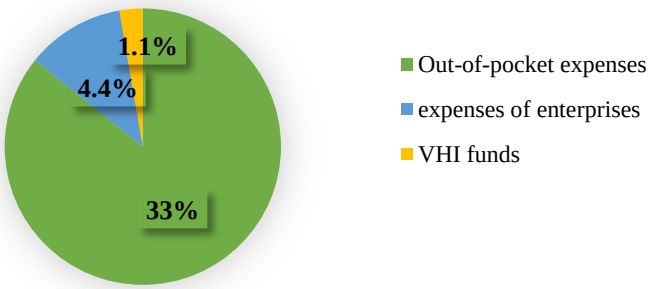
Figure 9. Out-of-pocket payments in Kazakhstan, 2010-2018[27]



According to the Figure 9, the amount of out-of-pocket health spending is growing since 2010. It is clearly seen, that in 2016 the amount of out-of-pocket payments sharply increased, from 456.8 billion tenge to 625.6 billion tenge. However, there was a decline in 2017 compared with 2016, by 2.8. Nevertheless, in 2018 private

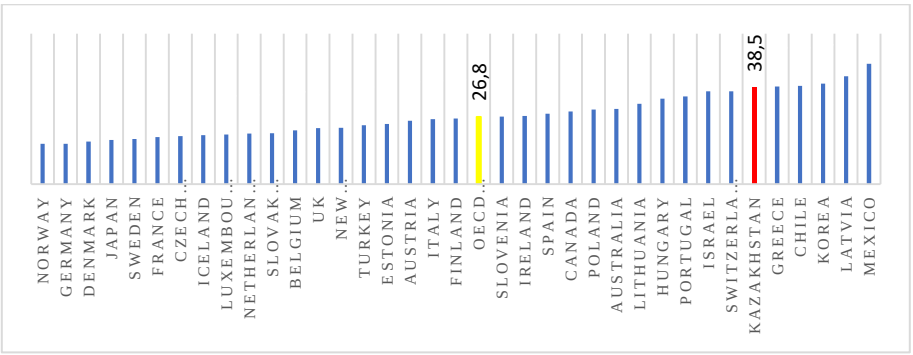
spending again showed growth and amounted to 679.5 billion tenge, which amounted to 38.5 % in total.

Figure 10. Determinants of out-of-pocket payments (38.5%) in 2018[27]



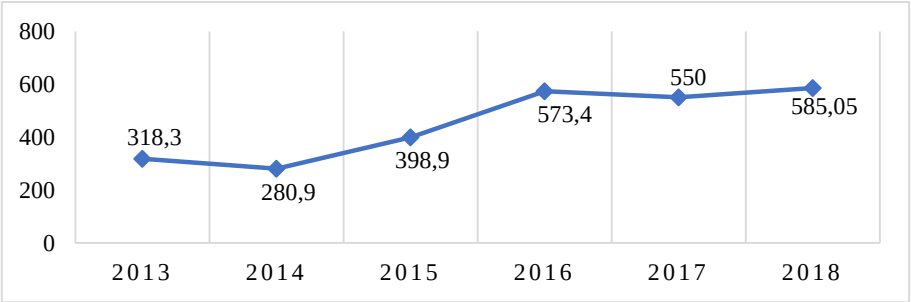
According to Figure 10, determinants of private expenses includes out-of-pocket expenses with 33% percentage, expenses of enterprises with 4.4% percentage and voluntary health insurance with just 1.1%.

Figure 11. Out-of-pocket payments in Kazakhstan and OECD countries in 2018, in% of current expenses on healthcare system[28]



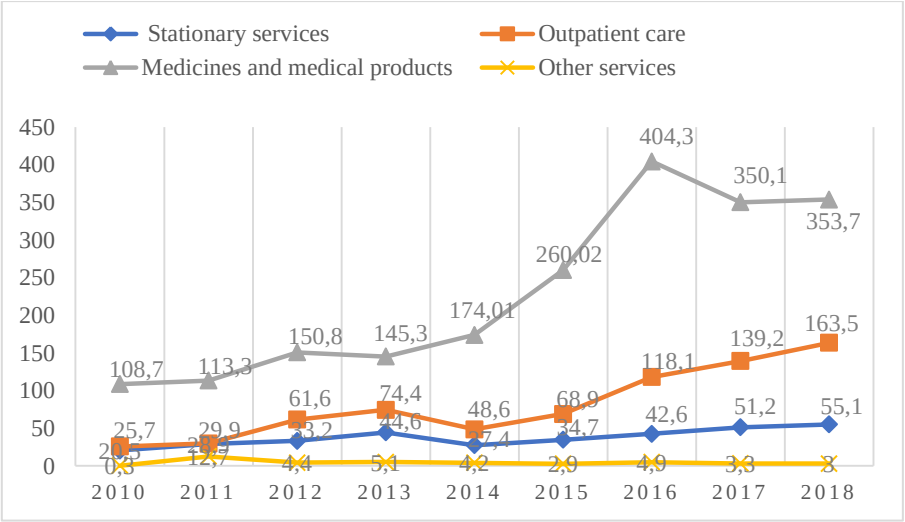
According to the Figure 12, direct household payments for health in 2018 amounted to 585.05 billion tenge (33% of current expenses for healthcare). Compared to the previous year (550 billion tenge),
this indicator increased by 6.3%. Moreover, in dynamics this indicator is growing annually. Since 2013 out-of-pocket payments of the population almost doubled, by 83.8%.

Figure 12. Out-of-pocket expenditures of the population on health care for the period 2013-2018 years (billion tenge)[27]



The decrease in household spending in 2017 compared to 2016 was largely due to a decrease in the cost of purchasing medicines. The volume of household spending on medicines in 2017 decreased by 13.4% compared to 2016. However, in dynamics, since 2010 it has grown more than 3 times - from 108.7 billion tenge in 2010 to 353.7 billion tenge in 2018. The rapid increase in drug spending can be explained by inflation and the devaluation of the national currency. Also, we note that the costs of outpatient treatment increased 6 times, and for services at the inpatient level - 2.6 times for the period from 2010 to 2018.

Figure 13. Determinants of “Out-of-pocket” expenditures of the population on health care in 2013-2018 (billion tenge)[27]



According to the Figure 13, In the structure of cash expenses of households on healthcare services in 2018, the main share accounted for medicines and medical products appointments - 353.7 billion tenge or 60.7% of total population spending on health care.

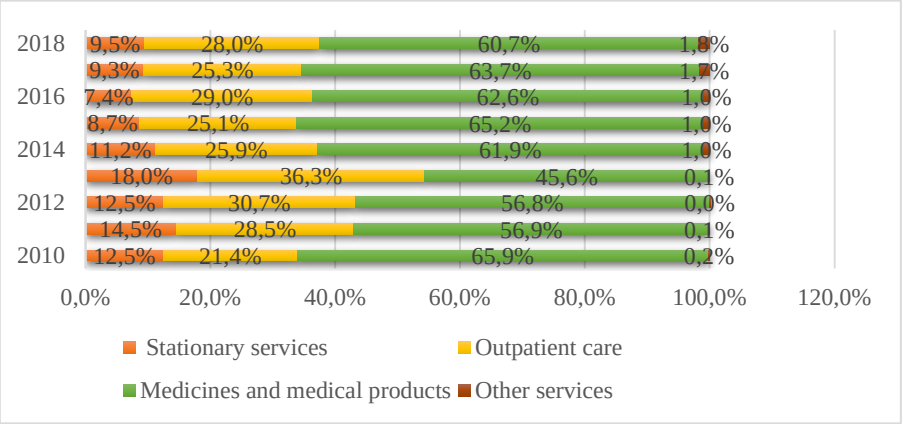
A high level of out-of-pocket payments is usually associated with the fact that the level of state financing does not provide sufficient demand for free and the population has to turn to the private sector, which provides paid medical services. Also, a high level of personal payments of citizens is associated with the acquisition of expensive drugs that are not covered in within the guaranteed volume of free medical care.

The list of the guaranteed volume of medical care was not reviewed for many years, which led to the fact that the state covered the costs of those services that were not in demand among the population. In this regard, in 2018, the list of free medical services was revised in order to reduce the level of cash expenses of the population and prevent the threat of approaching the poverty

line. It is cash payments that characterize the population adequacy of health financing in general. And since in Kazakhstan there is a tendency to a constant increase in “out-of-pocket” payments of citizens, there is already an underfunding of the industry.

According to the structure of private household spending in Kazakhstan, in 2018 there was a significant reduction in the cost of medicines and medical supplies by 3 percentage points compared to 2017. However, there was an increase in expenses for inpatient and outpatient care by 0.2 percentage points and 2.7 percentage points respectively.

Figure 14. The structure of household spending on medical services (%)[27]



Despite the increase in allocated funds for the provision of pharmaceutical products by the state, population continues to purchase drugs at its own expense funds. However, despite the nominal increase in spending on pharmaceutical products and long lasting medical products use by 1% from 350.1 billion tenge in 2017 up to 353.7 billion tenge in 2018, their share in the structure of expenditures of the population is reduced from 63.7% down to 60.7%. In addition, an increase in pharmaceutical costs amounted

to 0.5% (from 247.2 billion tenge in 2017 to 248.5 billion tenge in 2018).

Pharmaceutical price index according to the Committee The statistics of the Ministry of National Economy of the Republic of Kazakhstan in 2018 amounted to 107.1%, which means that the volume consumption decreased by 6.6%. At the same time, consumption of durable medical supplies declined by 4.6%. Thus, the increase in spending on medicines and medical products occurred precisely due to price increases. This means that ongoing state campaign to expand the list of ALO is effective and works, and has led to a reduction in consumption expenditures by medicines.

Figure 15. Structure of household spending on pharmaceuticals in 2017-2018[27]

tenge

	2017	**2018**	**Grow in nominal terms**	**Increase in value**
Provision of medical supplies	350 163 300	353 765 243	1.0%	-5.6%
Pharmaceutical and other non-durable medical products	247 229 200	248 585 427	0.5%	-6.6%
Therapeutic devices and other durable medical supplies	102 934 100	105 179 816	2.2%	-4.6%

Consider the structure of consumption of outpatient services due to means of the population. The largest share of the population's expenses falls on paramedical services, which include massage,

physiotherapy, etc. - 54.93% (89.8 billion tenge). This is followed by expenses for basic medical services at the outpatient level - 18.2% (29.8 billion tenge). Dental treatment costs account for 15.4% (25.2 billion tenge) of all expenses on an outpatient basis. Consultative and diagnostic services (CDD) account for 11.4% (18.6 billion tenge).

So, the increase in the consumption of outpatient services in 2018 in nominal terms amounted to 17%. The price index for medical services, according to the Statistics Committee of the MNE of the Republic of Kazakhstan, in 2018/17 amounted to 107.6%. Thus, the increase in the volume of medical services amounted to 10%.

In the structure of expenses for outpatient services, the largest increase in volumes is observed in specialized outpatient treatment, which includes consultations of narrow specialists and clinical diagnostic services. Thus, the most inaccessible are CDDs, the consumption of which grew in 2018 by 18% compared to 2017.
The increase in expenses for dental treatment in nominal terms amounted to 18%, while the increase by 7.5% was due to a rise in prices (price index for dental services 107.5%), therefore, the increase in the volume of dental services amounted to 11%.

Figure 16. Structure of household spending on outpatient services in 2017-2018[27]

tenge

	2017	**2018**	**Grow in nominal terms**	**Increase in value**
Outpatient care in total	139 206 983	163 500 483	17%	10%
The main medical services in outpatient level	25 528 016	29 826 206	17%	9%
Outpatient dental	21 309 185	25 224 305	18%	11%

treatment				
Specialized outpatient treatment	14 852 186	18 633 092	25%	18%
Other types of outpatient treatment	77 517 696	89 816 880	16%	9%

Increase in expenses for inpatient and rehabilitation treatment amounted to 7.6% and 10.1%, respectively. However, as noted higher, according to the Committee of Statistics of the MNE of the Republic of Kazakhstan, the price index for medical services amounted to 107.6%. Thus, the increase in volume consumption of stationary services is not observed in 2018, and consumption of rehabilitation services increased by 2.5%.

Figure 17. Structure of household spending on other treatment in 2017-2018[27]

tenge

	2017	**2018**	**Grow in nominal terms**	**Increase in value**
Medical services on stationary level	51 221 663	55 129 445	7.6%	0%
Rehabilitation treatment in a hospital	9 005 642	9 916 144	10.1%	2.5%

Underlying Factors in the level of personal payments of citizens continues stay high. There are several reasons for this which were identified as a result of the analysis:

- a relatively low level of financing for the industry as a whole;
- a high level of pharmaceutical costs, which associated with rising drug prices;

- staff shortages, in particular of narrow specialists, in state medical institutions.

Actually, there are factors which impacts to determining out-of-pocket expenditures, as age determination, location, household economic status, gender, type of illness and its severity, health insurance coverage.

Therefore, despite the decrease in the cost of medicines, the costs of outpatient care and inpatient care have increased. The level of personal payments of citizens continues to remain at a high level. Adequate effective replacement of private spending by government spending does not occur. Therefore, there is a lack of access to medical services. A high level of private spending on health services suggests that the population prefers to pay for medical services at their own expense. And this means that the allocated state funds are not being used effectively enough. Therefore, it is necessary to introduce such an indicator on allocated public funds, which would respond to the effectiveness of the use of funds in health care. In world practice, the effectiveness of the use of funds in health care is assessed using indicators such as indicators of the quality of budget spending management, direct results and final results.

Quality indicators of budget spending management may include such as, for example, the share of budget funds allocated to health care, per capita spending, etc. Outcome indicators include the volume of outpatient care per capita, the volume of provision ambulance per 1 resident, the ratio of planned and emergency hospitalizations, the volume of inpatient care, etc. Outcome indicators show the effect of the current health policy and may include the following: mortality (infant, general), mortality from various causes of death, morbidity indicators, population satisfaction with the quality of medical services. So, despite the annual increase in funds allocated to health by the state, the expenditures of the population continue to grow. From here, the

population pays for relatively cheap services such as outpatient services and the purchase of medicines.

There may be several reasons for outpatient services in the private sector. For example, the ability to quickly receive services (there are no long queues) and, accordingly, save time, more attentive medical personnel due to the lack of a huge flow of people and a better financial situation, or due to the distrust of the population in the public sector of medical services. Also, with private outpatient care providers, the population may be hoping to receive better treatment. Despite the increase in funds allocated for the provision of pharmaceutical products by the state, the population continues to purchase medicines at their own expense. This may indicate an ineffective distribution of medicines at the level of outpatient care, inaccessibility of outpatient care, personal interest of primary care physicians to prescribe prescriptions for certain drugs.

Thus, it should be noted that the insufficiently effective distribution of outpatient care inhibits the development of primary health care. The need for serious work to improve the quality of medical care in the public health sector is recognized. Therefore, Kazakhstan needs to promote the principles of evidence-based medicine, develop and introduce new clinical guidelines based on WHO standards, working to improve quality at the level of a health care provider. These measures will help to reduce private, namely out-of-pocket payments of citizens on health services.

2.3 Healthcare funding of OECD countries

The main financing models in the system health care. In world practice, all health systems have a mixed financing structure, with a predominance one of 4 main models: - budget model, main source of financing – general taxation. This model is distributed in 22

countries of the world (Great Britain, Australia, Canada, etc.) of 54, guaranteeing universal medical coverage help;
- social health insurance - funded by mandatory joint contributions of the state, employers and employee. Distributed in 30 countries out of 54 (Germany, France, Japan, Korea);
- private medical voluntary contribution insurance employers or workers themselves (US before Reform 2009 Health and Patient Protection);
- health savings accounts apply mainly in Singapore. Funded by solely due to the income of working citizens.

The budget model is characterized by a high level of financial stability and social security, but practically no effect on individual liability of citizens for own health and competition among suppliers of medical services. Introduction of compulsory social health insurance in Kazakhstan in 2017 will increase responsibility of population for their health. In this study were used international best practices and the principle of social justice. In addition, health insurance is one of the levers to increase the economic interest and responsibility of healthcare organizations and medical workers for the high result of their activities, as well as development competitive environment between medical organizations.

World practice shows that SHI systems provide universal coverage of the medical help. Countries such as Estonia, Czech Republic, Hungary, etc. were able to achieve this figure with funding health care in the range of 5-8% of GDP. Regardless from the goals of implementation and functioning of SHI in various countries have common functioning mechanisms and development trends that provide stability and effectiveness of SHI. SHI funds have high level of autonomy with a high degree of participation all social partners in management through supervisory boards or other bodies. Exist legislatively established mechanisms of self-regulation of various elements of SHI systems: the formation of governing bodies, tariff setting, technology assessment, recognition qualifications of medical workers, accreditation health care

providers etc. Bet size insurance premiums, as well as the share of employee and employer payments, varies by level of development of the country. For example, in Germany 14.1% of the fund remuneration, in Austria from 6.5% (farmers) to 11% (pensioners), in France 13.6% and in Russia 5.1%. One of the problems of health insurance is competition between insurance funds for patients. An example of this mechanism is Germany, where insurance premiums collected over 130 insurance funds of the country are accumulated in a single fund risk equalization and complemented by subsidies from federal budget. Formed pool of funds adjusted for gender correction factors, age, income and health status and redistributed between insurance funds.

Quite efficient system models work in the world health insurance system. The system of financing health care in a country can be carried out state budget and / or through mandatory and voluntary health insurance.

UK experience. The UK occupying a leading position in the state system of health care support and health insurance. This is a whole direction of the state's social policy of UK, which in the course of its development only strengthened its influence and control over the activities of medical and insurance organizations.

This system is available for population at relatively low cost of medical assistance. Most of funds are allocated from state budget and centrally redistributed. At the same time, it rises a monopoly on rendering medical and insurance services. In patients, as a rule, there is no possibility of choosing a doctor and medical institutions, control over activities is complicated medical facilities on the part of patients. Most common in countries such as Germany, France, Holland, Austria, Belgium, Switzerland, some Latin American states, and Japan has a principles-based solidarity system. All participants in this system are given the ability to control the use of insurance funds, and the insured to choose a doctor, medical institution. This system has its own problems, for example, how to ensure equal access and payment medical assistance provided to

persons from high risk groups (elderly, poor, disabled), evenly distribute funds among the insured.

The insurance system is funded from 3 sources:

1) insurance premiums of entrepreneurs - deductions from income;
2) earnings of workers - deductions from wages boards;
3) state budget funds[6].

German experience. The first insurance company in Germany, offering clients a medical insurance policy, appeared in 1848. In the German system - the state does not finances health care (excluding certain sectors), but at the same time ensures the creation of insurance funds by employers and workers. State performs a supervisory function over the work of the entire system of health insurance which in Germany is decentralized. It operates approximately 1200 insurance funds (or cash registers), which are created by professional or territorial principle.

According to the German law, all employees as well as members of their families, with income not exceeding a certain amount required the law – have to have a health insurance. The amount of annual income that exceeds the mandatory for state health insurance is changing annually. According to 2017 data, those who receive per year more than 52,200 euro, they can decide for themselves which they need insurance - private or public.

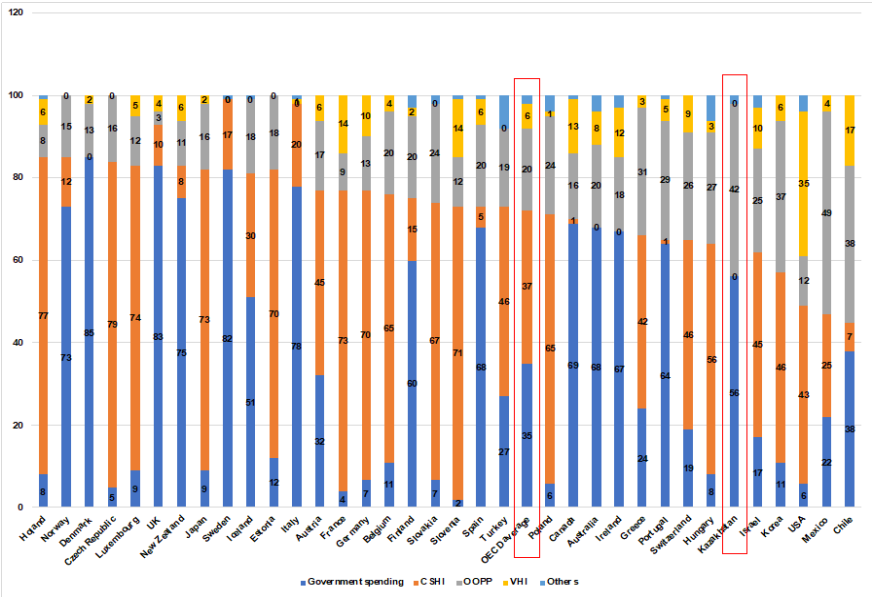
Approximately 20% of the total number of insured along with state have private health insurance companies (there are about 50 of them). According to the state health insurance system basic medical services are provided free of charge. However, there are exceptions, such as dental services. Nevertheless, some insurance companies offer additional service packages, for example, with regular a visit to a dentist can pay 90%. If the insured leads a healthy lifestyle, does not have bad habits, regularly visits the gym and never for a year did not go to doctor, then he can be returned some amount of money. Children’s (under 18 years old) all medical services and medicines are covered by insurance [6].

Insurance in the USA. Basically, a medical system of the USA insurance is organized on a voluntary basis, and insurance costs are borne by every citizen by yourself. In the USA, mainly private health insurance system operates, the system is decentralized and has highly developed infrastructure of insurance organizations.

The health insurance system is based on the fact that every US citizen has the right to purchase insurance for his money (except for the services of a dentist). Insurance does not cost small funds, therefore, mostly employers contributes for their employee, i.e. if a person works full time, then the employer provides him with a complete "social package" in which includes the certain types of insurance.

The main advantage of this system is its high quality of medical services provided. It is known that the USA has a high health care quality and high-tech, but at the same time it is expensive and affordable for not all segments of the population equally. Historically prevailing fact – thr USA citizen must take care about their health and doctors are not required to provide free help except in emergency cases.

Figure 18. The structure of health funding by OECD countries in 2017 [31]



After having a brief information about social insurance in another OECD countries, it is understandable, that every country has their own system of healthcare due to different condition of countries. In the figure above shown the structure of their healthcare funding in 2017. There are countries which does not have social insurance system, for instance in Denmark, Australia, Ireland. Countries with big proportion of government spending on healthcare: Denmark, Norway, UK, New Zealand, Sweden, Italy and etc. OECD average percentage was counted for these countries, with 35% government spending, 37% compulsory social health insurance, 20% private (out-of-pocket money) expenditures, 6% voluntary health insurance and 2% other insurances.

Chapter 3. Problems and improvement ways of social health insurance implementation in Kazakhstan

3.1 The main problems and discussion

After implementing compulsory social health insurance, more than 90% of the population of Kazakhstan (18,6 million people) have become participants in the CSHI. From these, about 11 million people are representatives of 15 privileged categories of citizens, and the state makes contributions for them.

In January 2020, 34.2 billion tenge was transferred as contributions and deductions for CSHI. Most of the contributions came from the state - more than 24 billion tenge (for preferential categories)[21].

According to the Figure 19, the total population of Kazakhstan is 18,6 million tenge for 1st of March 2020 year and on the table they are divided by categories: 15 preferential category, employees, individual entrepreneurs, payers of cumulative aggregate payment and independent payers. From them 91.4% are conditionally insured by CSHI in 2020[30].

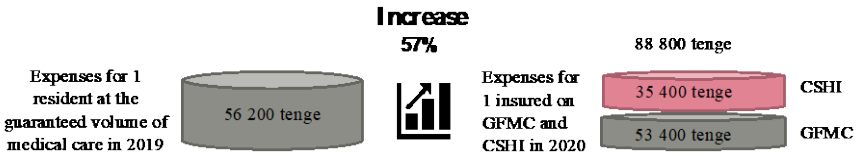
Figure 19. The categories of compulsory social health insurance payers for 2020[30]

15 preferential categories	10.6 mln	56.9%
Wage-earners, employees	5.4 mln	29.0%
Individual entrepreneurs and private traders	0.7 mln	3.8%
Payers of cumulative aggregate payment	0.3 mln	1.5%
Independent payers	1.6 mln	8.6%
Total	**18.6 mln**	**100%**

91.4% conditionally insured

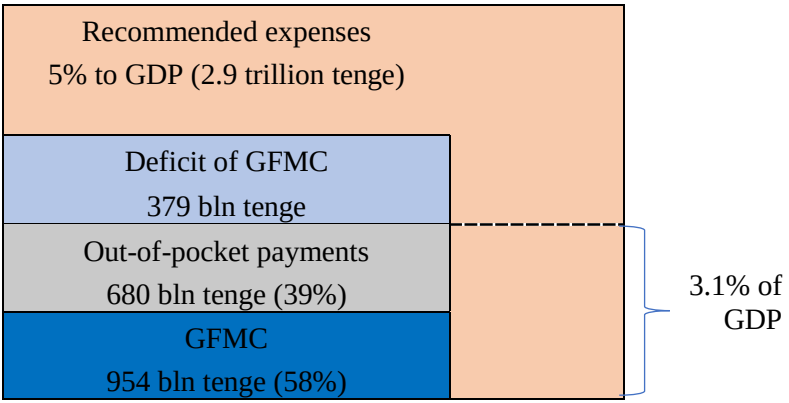
In the Figure below, it is obviously seen the increase in expenses for per household after introduction of compulsory social health insurance. Expenses for 1 household at the guaranteed volume of medical care in 2019 was 56 200 tenge, and expenses for 1 insured on guaranteed volume of medical care and compulsory social health insurance in 2020 is 88 800 tenge.

Figure 20. Increase of expenses for 1 household on GFMC and CSHI in 2020



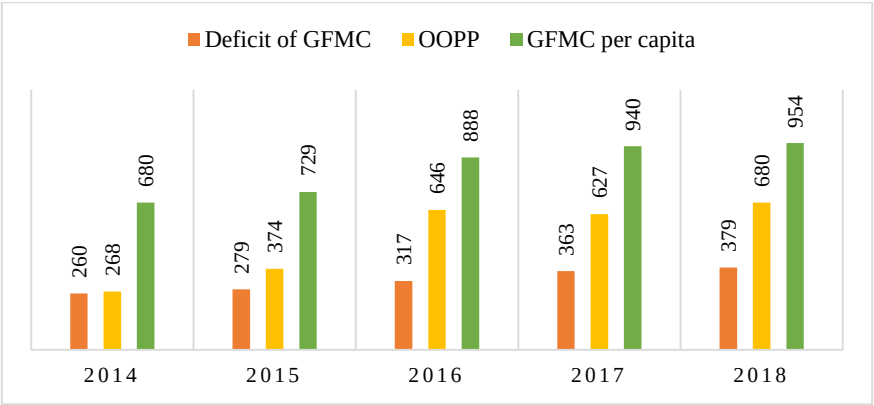
On recommendations of World Health organization the health funding should be minimum 5% from GDP. In the case of Kazakhstan, the percentage from GDP is not enough for minimum level of GDP, exactly 3.1%. In 2018 Guaranteed free medical care per capita was funded for 954 billion tenge with 58% and out-of-pocket payments was 680 billion tenge with 39%. If measure of deficit of other 1.9% for 5% of GDP, it will be 379 billion tenge (Figure 21).

Figure 21. The deficit of Guaranteed free medical care for 2018[30]



In the Figure below is shown the deficit of GFMC for 2014-2018 years in comparing with GFMC per capita and out-of-pocket expenses. From 2014 the level of deficit of GFMC is increasing. The amount of deficit depends on the level of GFMC per capita and out-of-pocket expenses.

Figure 22. The deficit of guaranteed free medical care by 2014-2018 years[30]



The aim of implementing new social health insurance system in Kazakhstan is increasing the expenses for one household and decrease the out-of-pocket payments. The importance of out-of-pocket payments is part of the financing system of health care in all countries. However, catastrophically high private spending can lead to financial instability of the entire health system, and national economy as a whole. High level of private health service costs suggests that the population prefers pay for medical services at their own expense. And this means that allocated public funds are not enough effectively used, there is still a shortage accessibility of health services. Also unregulated high health care prices are often an obstacle to access to necessary medical care, and also contributes to growth of pocket payments, causing financial problems protection of the population.

The hypothesis of the work is the implementing of social health insurance system decreases the level of out-of-pocket payments. The compulsory social health insurance system in Kazakhstan started to work from January 1, 2020. The coverage of population is 91.4% currently. To determine whether we disprove or accept the hypothesis of this work, a forecast was made on the indicator of out-of-pocket payments until 2023 year. The main indicators what was counted in forecasting are contributions to CSHI and GFMC. The forecast of contributions to CSHI was counted by using statistical data and tariffs for every category.

According to forecast made by author, in 2020 the amount of out-of-pocket payments will decrease by 1.13 times, amounting 521.25 billion tenge (34.6%). The determinants of out-of-pocket payments the same shares were taken as for 2019: 60% of total share takes expenses for medicines. In 2023 the level of out-of-pocket payments will decline by 1.3 times, with 457.41 billion tenge (30.4%). Forecasting of GFMC for 2021-2023 was counted by using number of services what will provide among guaranteed free medical care (Appendix 4).

According to the forecast of government, what was taken from analysis of national accounts of healthcare by Republic center of healthcare development, phased increase in state medical expenses under GFMC and CSHI until 2023, according to on behalf of the President of the country in his message, including an increase in spending on public health services from 4% of state expenses up to 10%, bringing tariffs on medical services to their level breakeven, through increase of average monthly wage of medical workers as well as through fixed assets renewal compensation medical organizations; implementing a co-payment mechanism on services in the hospital for removal informal payments in medicine from the shadows. Along with the introduction of mandatory social health insurance development and promotion should be provided voluntary health insurance by reducing the tax base for income tax. As a result of specification of the list medical services by indicating conditions and consumption limits, deficit of the guaranteed volume of medical care in 2019 year will be reduced by 34%, and with the introduction of CSHI will gradually be leveled, which in turn will lead to a decrease in private population spending for services included in GFMC. It is assumed that health care costs from all funding sources will increase to 4.7% of GDP in 2023, government spending will increase to 2.8% from GDP. In this connection, out-of-pocket payments will remain at 1.3% of GDP, and their share in total health spending will decrease from 38% in 2017 to 29% in 2023.

In conclusion, the main goal of implementing social health insurance is total coverage of healthcare costs, not by out-of-pocket payments of households. According to analysis of healthcare financing, including government spending and out-of-pocket payments, and forecasting of contributions to CSHI and the level of out-of-pocket payments the hypothesis of dissertation was approved with the help of implementing compulsory social health insurance system.

3.2 Methodology of data

Methodology. The research methods of dissertation are system analysis, statistical analysis, quantitative analysis, forecasting and PEST analysis. The main research methods:

1) The first stage was implemented by analyzing all existing approaches to determining the meaning of social health insurance, defining criteria, considering types and factors of health insurance, experience of other countries;
2) The second stage included the diagnostic work and control of statistical information regarding expenses of households on medical care, analyzing of report of Republic center of healthcare development about national accounts of healthcare for 2010-2018 years. All the information regarding government spending and out-of-pocket payments of households were taken from this report. Information about compulsory social health insurance payers, socially vulnerable population of the Republic of Kazakhstan were found on the the official site of Compulsory health insurance Fund, expenditures of Fund's assets, Statistic committee of Republic of Kazakhstan, Taldau.stat.gov.kz, the official site of Ministry of Healthcare of Republic of Kazakhstan, OECD reports.
3) At the third stage, all the information was analyzed by formatting tables, graphics.
4) At the fourth stage, after analyzing of information, with the help of assumptions of MNH of RK, the out-of-pocket payments of population were forecasted for 2020-2023 years. More so, identified the main fiscal problems of implementing the social health insurance, the hypothesis of dissertation were approved, goals for the further stage of the study are formulated.

As the results of dissertation was made by using forecast analysis, there should be a detail consideration of assumptions. Firstly, contributions to compulsory social health insurance were counted by using statistical data and special tariffs for every category. According to the Appendix 5, decrease in out-of-pocket payments was counted dividing the current year GFMC and CSHI to previous year indicator. The forecast for GFMC was taken from Compulsory medical insurance Fund's forecast in 2020 and other years by using the number of services by GFMC. Determinants of Out-of-pocket expenditure were taken the previous year(2019) percentages, for stationary services – 9%, outpatients care – 28%, medicines and medical products – 60% and for other services – 1%.

To decrease the percentage of out-of-pocket payments to the level of recommended by WHO (20%), there were made second forecast, as a recommendation, increasing the tariffs for every category and level of state budget. The detail information will be described in recommendation chapter.

PEST analysis describes the advantages and disadvantages sides of political, economical, social and technological factors of implementing compulsory social health insurance in Kazakhstan.

The empirical base of the dissertation research was compiled by official statistics, regulatory acts of Kazakhstan, documents of Compulsory health insurance Fund, reports of Republic center of healthcare developments, OECD official site, MNH of RK.

During the search, there were found problems with information about amount of payment each of category of payers, the expenditures of Fund's money, not updated information, discrepancy of information. It is understandable with the reason of newness of the system.

3.3 Recommendations for further development

As proposed measures to reduce out-of-pocket expenses as the one of the main problem of implementing compulsory social health insurance in Kazakhstan may consider:

- Increase in universal medical coverage services of population [27].

Strengthening needed to move towards universal coverage health systems, and the main thing to do this is reliable financial structures. In conditions when the main part PHC costs have to be paid from your own funds, low-income people often cannot get many of the services they need. Even Households with higher average incomes may have financial difficulties in case of severe or prolonged illness. Pooled funds from mandatory funding sources (such as compulsory insurance premiums) can distribute financial disease risks among the population. So, thanks for introduction of compulsory social health insurance universal coverage of medical services is expanding. In many countries, this is due to the expansion of the list of preferential categories of citizens. Some countries are increasing coverage among middle and high working groups income level by expanding the role of voluntary insurance (additional model). Improving PHC coverage and health indicators also depends on the availability of health care workers and their ability to provide quality comprehensive care focused on the patient. The most important condition for ensuring universities are investments in quality primary health care. Investing in primary health care level labor - the most cost-effective way to expand access to basic health services.

- Increase in total current expenses for medical services within the framework of the guaranteed volume of medical care and health insurance [27].
- Increase the percentage of tariffs for contribution to CSHI.

As it shown in Figure 2, the current tariffs for employers and employees – 2% from salary. Using the higher tariffs assumption

there were made forecasting(Appendix 6), as a result in 2023 the percentage of out-of-pocket payments reached to 20.4%. Excepting the increase in contribution to CSHI, the level of GFMC and state budget increased. Recommended tariffs to reach the level of percentage recommended by WHO: government contributions for 15 preferential category – 10% , employer deductions – 10% , employee contributions - 5%, and individual entrepreneurs contribution – 8%(Appendix 7) .

This will solve 2 problems right away:

- Reducing private healthcare spending in structure of current health care spending;
- Bringing the level of current expenses to the level international standards.
- revision of approved tariffs for the provision of medical services within the framework of the guaranteed volume of medical care and health insurance [31].
- cost containment funds.

Pharmaceutical medicines costs account for the largest share out-of-pocket expenses. In this regard, one of the solutions to the problem cuts the out-of-pocket spending becomes price controls on drug market. Setting price caps for medicines will affect the decline in social tensions through equitable economic accessibility citizens on the use of medicines. In addition, further expansion of the outpatient drug provision list will also allow reduce household drug spending. It will be promoted a new CHSI model by which free drugs will increase 2 times, and the package of services the guaranteed amount of assistance will increase by 5 times.

Conclusion

The creation of a modern and effective healthcare system is one of the most important goals of the Development Strategy of Kazakhstan until 2050 and a key condition for ways of entering the Republic of Kazakhstan into the thirty most developed countries of the world.

Social health insurance is divided into two main forms of compulsory and voluntary insurance. At the same time, the scope of compulsory insurance is clearly regulated in normative legal acts, rules on objects and insurance rates are fixed. The law of the Republic of Kazakhstan gives the following concept to compulsory health insurance: “Obligatory social health insurance is a set of legal, economic and organizational measures to provide medical care to consumers of medical services from the assets of the social health insurance fund” [17].

After implementing compulsory social health insurance, more than 90% of the population of Kazakhstan (18,6 million people) have become participants in the CHSI. From these, about 11 million people are representatives of 15 privileged categories of citizens, and the state makes contributions for them.

In January 2020, 34.2 billion tenge was transferred as contributions and deductions for CSHI. Most of the contributions came from the state - more than 24 billion tenge (for preferential categories).

The hypothesis of the work is the implementing of social health insurance system decreases the level of out-of-pocket payments. The compulsory social health insurance system in Kazakhstan started to work from January 1, 2020. The coverage of population is 91.4%, currently. To determine whether we disprove or accept the hypothesis of this work, a forecast was made on the indicator of out-of-pocket payments until 2024 year. The main indicator what was counted in forecasting is contributions to CSHI and GFMC. The forecast of contributions

to CSHI was counted by using statistical data and tariffs for every category.

According to forecast made by author, in 2020 the amount of out-of-pocket payments will decrease by 1.13 times, amounting 521.25 billion tenge (34.6%), in 2023 to 30.4%.

In conclusion, the main goal of implementing social health insurance is total coverage of healthcare costs, not by private expenses of households. According to analysis of healthcare financing, including government spending and out-of-pocket payments, and forecasting of contributions to CSHI and the level of out-of-pocket payments, the hypothesis of dissertation was approved with the help of implementing compulsory social health insurance system.

Furthermore, using the higher tariffs assumption there were made forecasting, as a result in 2023 the percentage of out-of-pocket payments will reach to 20.4%. Recommended tariffs to reach the level of percentage recommended by WHO: government contributions for 15 preferential category – 10%, employer deductions – 10%, employee contributions - 5%, and individual entrepreneurs contribution – 8%.

Excepting of identified problem, a number of issues remain unresolved in Kazakhstan, such as insufficient financing of the health system, high level of informal payments of citizens, underfunding of the PHC sector and the need for its further development, a high proportion of expenses for inpatient care. Among the key health problems, the absence of solidarity and employers in health, financial instability of the system and insufficiently effective structure of medical care. As a result, the lack of solidarity of citizens and employers in the protection of health entailed the fact that the burden health care lies only with the state.

REFERENCES

1. “The Strategy “Kazakhstan-2050" new political course of the established state” announced by President on December 15, 2012.
2. Nation plan of the President of Kazakhstan“100 concrete steps to implement the five institutional reforms”
3. Adam Wagstaff “Social Health Insurance Reexamined”// World Bank Policy Research Working Paper 4111, January 2007, p.2-20
4. L. G. Skamai “Insurance business” // textbook. manual for university students enrolled in the specialty “Management org”/ Ministry of education RF, INFRA-M, 2010, p. 168
5. Robert G.Evans “Financing Healthcare: taxation and alternatives”// European observatory on Healthcare System Series, 2002, p.31
6. A.K.Turgambayeva, L.S.Yermuhanova. International experience of introduction social health insurance: features of leading countries of the world.// Bulletin of KazNMU No. 4-2017,P.355-359
7. A.M. Kurmanov “Effective functioning of the social health insurance system”// Bulletin of KazNMU No.3-2016, P.15-17
8. G.T.Saparova “Compulsory Social Health Insurance in Kazakhstan”//The article in “Finance and Theory” science journal, 2017, P.312-319
9. G.K.Sarybayeva, G.Zh.Kapanova “Information of the self-employed population of the city of Astana about the implementation of CSHI in the Republic of Kazakhstan”//Bulletin of KazNMU No.2-2018, P.417-422
10. Muratbek D. (2018) “Determinants of Healthcare expenses in Kazakhstan”//The article in “Finance and Theory” science journal, 2018, P.265-269
11. J.Okoroh, S.Essoun, H.Harris, J.Weissman, R.Riviello “Evaluating the impact of the national health insurance scheme of

Ghana on out of pocket expenditures: a systematic review"//the article published in BMC Health services research, 2018
12. D.Madiyarova, L.Sembiyeva, A.Nurumov "Financial aspects of healthcare reforms of the Republic of Kazakhstan"//the article "Новизни Світовоі науки" АКТУАЛЬНІ ПРОБЛЕМИ ЕКОНОМІКИ №1(139), 2013, P.407-415
13. About the approval of the State program for the development of health care of the Republic of Kazakhstan "Salauatty Kazakstan" for 2011-2015: Decree of the President of the Republic of Kazakhstan dated 11.29.2010 No. 1113 // zdrav.akmol.kz.
14. "On the health of the people and the healthcare system": Code of the Republic of Kazakhstan dated September 18, 2009. No. 193-IV SAM // www.zakon.kz.
15. Since January 1, 2010, the Unified National Health System has been introduced in the republic in order to provide inpatient and inpatient replacement medical care, which has necessitated the consolidation of the budget at the regional and then at the republican level // zdrav.akmol.kz.
16. The strategy "Third Modernization of Kazakhstan: Global Competitiveness" Address of the President of Kazakhstan, 2018
17. The Law of the Republic of Kazakhstan " On compulsory social medical insurance" dated November 16, 2015 No. 405-V.
18. About compulsory social health insurance. https://www.inform.kz/en/osms-chto-dolzhen-znat-kazhdyy-kazahstanec_a3577026
19. Compulsory social health insurance system. Source: https://pro1c.kz/articles/obyazatelnoe-sotsialnoe-meditsinskoe-strakhovanie-osms/obyazatelnoe-sotsialnoe-meditsinskoe-strakhovanie/
20. Document of NJSC CMIF " New model of GFMC and CSHI" http://hmc-astana.kz/
21. Official site of NJSC CMIF https://fms.kz/

22. The strategy development of NJSC CMIF for 2017-2021y. https://fms.kz/
23. Compulsory social health insurance in 2020. https://shopomania.kz/news/373-obyazatelnoe-medicinskoe-strahovanie-v-rk-2017-osms.html
24. K.O.Shayahmetova, K.SH.Syzdykova, G.B.Rakhimzhanova " Problems of development of health care in Kazakhstan at the present stage"//Bulletin of KazNU No.5(81) 2010, P.79-86
25. Global spending on health: A World in Transition.//Global Report of World Health Organization, 2019, 16 page
26. Z.M.Temekova, A.B.Ishanova. Using National Health Accounts Data for Effectively Planning Statewide Expenditures for the Implementation of Compulsory Health Insurance.// Republican Center of Health Development of the Republic of Kazakhstan, 2018, P.7-11
27. G.N.Zagidullina, B.S.Omirbayeva. Analysis of private expenses on healthcare in Kazakhstan and recommendations of reducing.// Republican Center of Health Development of the Republic of Kazakhstan, 2019, P.7-20
28. Health Account System 2011// World health organization, Geneva - 2012.
29. National Health Accounts of Kazakhstan//OECD Reviews of Health systems, 2018, P.32-33
30. Document of NJSC CMIF "Compulsory Social Health Insurance" https://fms.kz/
31. Out-of-pocket payments, user fees and catastrophic expenditure – WHO, 2017: /https://www.who.int/health_financing/topics/financialprotection/out-of-pocket-payments/en/

Appendix 1

№	Name of categories	RK
1	Children	6 309 883
2	Pension Beneficiaries	2 240 751
3	Full-time students	686 676
4	Disabled people	409 779
5	Persons on maternity leave on child care	394 038
6	A unemployed person raising a child before he reaches the age of three years	164 477
7	Disabled pregnant women	156 430
8	Persons registered as unemployed	95 579
9	Unempoloyed persons caring for a disabled child	50 305
10	Mothers of many children awarded with pendants "Altyn alka", "Kumys alka"	47 766
11	Persons serving sentences under a sentence in a penitentiary system	17 397
12	Unemployed person caring for a disabled person of the first group since childhood	11 433
13	Unemployed oralmans	8 274
14	Persons held in pre-trial detention facilities	5 201
15	Disabled recipients targeted social assistance	
Total		10 597 989

billion tenge

Types of services	2018	2019	2020			%
	GFMC	GFMC	GFMC+CHSI	GFMC	CHSI	
Rehabilatation treatment and palliative care	5.8	8.1	57.2	3.8	56.3	741
Consult-diagnostical care	23.4	29.9	205.9	25	136.7	541
Inpatient substitution care	41.6	47.4	88.9	55.7	27.5	176
Provision of medicines	101.9	83	214.4	83	111.3	234
Pathological anatomy	0.9	1.5	3.2	1.6	0.5	234
Primary health care	243.3	292.9	266.1	335.4	-	142
Ambulance	37.4	45.5	56.7	53.4	-	115
Blood production	16.9	17.7	20.5	20.7	-	117
Socially significant diseases	124	142.5	156.3	165	-	117
Inpatient care	326.8	360.7	423.4	228.1	237.1	116
AIDS prevention and control	3.5	8.7	12.6	15.1	-	129
Treatment abroad	-	1.4	1.5	1.4	-	174
TOTAL	**925.5**	**1039.3**	**1506.7**	**988.2**	**569.4**	**150%**

Appendix 3

№	Group of factors	Impact +/-
1	**Political**	+ The compulsory nature of the compulsory medical insurance system, which contributes to the maximum coverage of citizens with insurance and reduces the likelihood of evading contributions and deductions to the compulsory medical insurance system. + Regulation of the CSHI and the Fund by regulatory legal acts, which ensures public control and consensus on key issues of development and functioning of the CSHI system. - Excessive government regulation that impedes the implementation of private initiative. The current regulatory legal acts regulating the mandatory nature of the staffing, office space limits the autonomy of state and the efficiency of private medical organizations, prevent the formation of optimal tariffs and help maintain excess costs.
2	**Economical**	+ Target nature of CSHI funds. Legislatively established restrictions on the use of OSMS means guarantee their safety and protect against seizure for other purposes. - The likelihood of an economic recession. Health spending tends to rise in times of recession. This may negatively affect the overall costs of the Fund for financing medical care, and therefore, its solvency.

3	**Social**	+ Favorable age structure of the population (a relatively high proportion of people of working age and a relatively low proportion of people over 65). Compared with developed countries, in Kazakhstan the age structure of the population is relatively young. + The need to improve the availability and quality of care. Planning the need for medical care based on an assessment of real needs, rather than the maintenance of infrastructure, will provide the basis for decision-making - The likelihood of an economic recession. Health spending tends to rise in times of recession. This can negatively affect the overall cost of medical maintenance of the Fund, therefore, on its solvency
4	**Technological**	+ Access to consulting services and technical assistance in the framework of the joint project of the Government of the Republic of Kazakhstan and the IBRD "Social health insurance: improving accessibility, quality, economic efficiency and financial protection" - Inadequate level of development of IT systems. The immaturity or absence of such components of the information system as detailed accounting of certain categories of consumers of medical services, administration of refunds of erroneous payments to the Fund, planning the need for medical care, automated assessment of suppliers' performance, personalized accounting of medical services consumption, etc. limit the effectiveness of the Fund.

Appendix 4

Revenues(Sources of financing)	2020	2021	2022	2023
State budjet	2,041.0	2,138.1	2,217.0	2,318.1
Total contributions to CSHI:	1,732.0	1,838.0	1,951.5	2,071.5
Employer deductions	482.1	504.5	528.5	553.0
Employee contributions	192.8	201.8	211.4	221.2
Individual entrepreneurs contributions	4.3	5.2	6.3	7.5
Government contributions for 15 preferential categories	1,052.8	1,126.5	1,205.4	1,289.7
Out-of-pocket-payments	613.24	585.39	562.97	538.13
Percentage	34.60%	33.03%	31.81%	30.40%
Expenditures on Healthcare	2020	2021	2022	2023
GFMC	988.2	1,011.6	1,011.6	1,028.3
Out-of-pocket expenditures	521.25	497.58	478.52	457.41
Stationary services	49.09	46.86	45.07	43.08
Outpatient care	145.67	139.05	133.73	127.83
Medicines and medical products	315.13	300.82	289.30	276.54
Other services	2.67	2.55	2.45	2.35
Total expenses on medical services of CMIF-forecast of World E	1,138.6	1,270.5	1,417.8	1,582.1
Number of services GFMC	591	605	605	615
Number of services CSHI	1517	1540	1540	1540
Increase in GFMC+CSHI	2,720.2	2,849.6	2,963.1	3,099.8

Appendix 5

Assumptions	2020	2021	2022	2023
Employer deductions	5%	5%	5%	5%
Employee contributions	2%	2%	2%	2%
Individual entrepreneurs contributions	7%	7%	7%	7%
Government contributions for 15 preferential categories	5%	5%	6%	6%
Decrease in Out-of-pocket-payments	1.13	1.18	1.23	1.29
Number of services GFMC	591	605	605	615
Number of services CSHI	1517	1540	1540	1540
Limitation MWI	15	15	15	15
GFMC (billion tenge)	988.2	1,011.6	1,011.6	1,028.3
Out-of-pocket expenditures:	100%	100%	100%	100%
Stationary services	9%	9%	9%	9%
Outpatient care	28%	28%	28%	28%
Medicines and medical products	60%	60%	60%	60%
Other services	1%	1%	1%	1%

Appendix 6

Revenues(Sources of financing)	2020	2021	2022	2023
State budjet	2743.32	3077.96	3240.61	3432.12
Total contributions to CSHI:	2350.88	2786.42	3066.90	3369.19
Employer deductions	589.35	720.73	860.01	1012.06
Employee contributions	252.58	450.46	477.78	506.03
Individual entrepreneurs contributions	4.93	5.94	7.15	8.60
Government contributions for 15 preferential categories	1504.02	1609.30	1721.95	1842.49
Out-of-pocket-payments	464.64	392.03	363.78	336.40
Percentage	28.24%	23.82%	22.11%	20.45%
Expenditures on Healthcare	2020	2021	2022	2023
GFMC	1239.30	1468.66	1518.66	1589.63
Out-of-pocket expenditures:	394.94	333.23	309.21	285.94
Stationary services	37.20	31.38	29.12	26.93
Outpatient care	110.37	93.13	86.41	79.91
Medicines and medical products	238.77	201.46	186.94	172.87
Other services	2.03	1.71	1.59	1.47
Total expenses on medical services of CMIF-forecast of World B	1,138.6	1,270.5	1,417.8	1,582.1
Number of services GFMC	591	605	605	615
Number of services CSIII	1517	1540	1540	1540
Increase in GFMC+CSHI	3,590.2	4,255.1	4,585.6	4,958.8

Appendix 7

Assumptions(recommended)	2020	2021	2022	2023
Employer deductions	7%	8%	9%	10%
Employee contributions	3%	5%	5%	5%
Individual entrepreneurs contributions	8%	8%	8%	8%
Government contributions for 15 preferential categories	7%	8%	9%	10%
Out-of-pocket-payments	1.49	1.77	1.91	2.06
Number of services GFMC	591	605	605	615
Number of services CSHI	1517	1540	1540	1540
Limitation MWI	25	25	25	25
GFMC (billion tenge)	1239.3	1468.7	1518.7	1589.6
Out-of-pocket expenditures:	100%	100%	100%	100%
Stationary services	9%	9%	9%	9%
Outpatient care	28%	28%	28%	28%
Medicines and medical products	60%	60%	60%	60%
Other services	1%	1%	1%	1%