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REGионаl FEATURES AND TRENDS OF MEDICAL SERVICE DEVELOPMENT IN Navoi Region: HUMAN CAPITAL FORMATION CONTEXT

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Abstract. Development trends of main economic activity in Navoi region shows that in 2020 the share of medical services is only 1% of the total volume of services, and the share of the Navoi region is only 2% of the total volume of services in Uzbekistan. The research of the incidence rates of the population for ten years 2010-2020 in the Navoi region showed that the upward trend in almost all age groups of the population and in the majority of classes of diseases. In the region, the sphere of medical services is lagging behind, and patients are forced to seek better quality medical services from other regions or emerging countries. The article examines the regional aspects of human capital development in sphere of medical service.

Keywords: Formation, human capital, health care, medical service, trends.

Introduction

The level of population health depends on the quality of services which are provided by the country's health care system. The role of the government in the field of health care and education is quite large. The creation of a high-quality health care system in the country that ensures the preservation and improvement of the health of the population, the creation of conditions for the upbringing of a healthy generation, is a priority direction of state policy.

The medical services market in Uzbekistan has undergone significant changes in recent years: along with state healthcare institutions providing free and paid medical services, the role of private medical companies is becoming more and more noticeable.

Features and trends of the medical services sector, the ratio and interaction of public and private medical institutions, development strategy, social significance - these issues are faced today by both the state and the managers of medical institutions and affect almost everyone.

Questions and disputes continue and will continue, and it is impossible to imagine once and for all the found optimal model of the activity of medical institutions - at different stages of development of the state, society and medical science, organizational and economic models of medical care for the population will change and adapt to existing conditions, which will determine their diversity.
The cost of medical services and their quality, that is, the problem of cost-effectiveness of medical services has become one of the key ones at the present stage of health care development.

The development of the medical services market is influenced by factors characteristic of markets in other areas: demand, supply, price, competition. As you know, market relations are characterized by free pricing, freedom of choice on the part of the consumer and the presence of competition among manufacturers. The price mechanism is a means of achieving efficient allocation of resources. With the help of the price level (with its free formation), the manufacturer is provided with the necessary economic information on the scale of supply and demand, expressed in consumer preferences, the degree of filling the market and the amount of costs.

If we consider medical services from a production standpoint, then healthcare services are formed as a result of the activities of medical service providers, which are aimed at maintaining and improving health. Through the receipt of medical services, both the individual needs of a person and the needs of society as a whole are satisfied. Thus, medical services are inherent in the property of a socially significant benefit, they satisfy the human need for medical care, in the preservation and strengthening of health.

An extremely important role in improving the quality of medical care and the formation of a highly qualified specialist is assigned to the issues of advanced training and retraining of doctors.

**Literature review**

Modern scientific literature, both economic and medical, operates with an abundance of definitions of the concept of a medical service, equally correctly reflecting its essence. The study of the definitions of the concept of "medical service" found in modern scientific literature allows us to conclude that at the turn of the XX-XXI centuries, the medical service was finally given a theoretical reflection of its economic nature, endowed with a cost component.

Lisitsyn Y.P., characterizing the medical service as activities necessary for the consumer, representing for him a certain value, believes that the service must be paid for prices that correspond to its resource supply, quality and labor costs [1].

According to Kh.P. Abulkosimov, a medical service is a complex of measures of participants, sources and organizations providing services in order to ensure the mental, physical and social health of the population [2].

M.Kh.Saidov and I.I.Nasriev believes that medical services are a one-time or comprehensive outpatient or inpatient medical service provided by a medical institution, as well as the provision of medicines, diagnostics, treatment and rehabilitation within the framework of medical insurance [3].
Thus, a medical service is a medical intervention or a complex of medical interventions aimed at preventing, diagnosing and treating diseases, medical rehabilitation and having an independent complete meaning.

**Research methodology**

The methodological basis of this research is the researches of scientists - economists, legislative and regulatory acts of Uzbekistan. Has been used the methods of logical, statistical and comparative analysis.

**Analysis and results**

In order to radically improve the mechanisms of organization and management of the healthcare system, over 160 regulatory documents have been adopted over the past three years. As a result, important changes are taking place at all levels of the health care system. Starting from primary health care and ending with specialized centers, new technologies are being introduced everywhere, the achievements of world science and medicine are widely used.

These changes are based, first of all, on the Decree of the President of the Republic of Uzbekistan dated December 7, 2018 "On comprehensive measures to radically improve the health care system of the Republic of Uzbekistan", Resolution of the President of the Republic of Uzbekistan dated December 18, 2018 "On measures on the prevention of non-communicable diseases, support of a healthy lifestyle and increase in the level of physical activity of the population ", Resolution of the President of the Republic of Uzbekistan dated January 23, 2018 " On measures to further streamline the production and import of medicines and medical products ", Resolution of the President of the Republic of Uzbekistan dated January 25, 2018 "On measures to accelerate the improvement of the system of emergency medical care", Resolution of the President of the Republic of Uzbekistan dated April 16, 2019 "On measures to develop public-private partnership in the field of health care", Resolution of the President Of the Republic of Uzbekistan from April 19 2019 year "On the approval of the national program to improve endocrinological care for the population of the republic for 2019-2021", Resolution of the President of the Republic of Uzbekistan dated May 6, 2019 "On measures to further develop the system of medical and pharmaceutical education and Science ", Resolution of the President of the Republic of Uzbekistan dated November 8, 2019 " On improving the quality and further expanding the coverage of medical care provided to women of reproductive age, pregnant women and children ", Resolution of the President of the Republic of Uzbekistan dated October 2, 2020 "On measures to further improve the system of public administration in the health sector."

The regional health care system in Navoi region includes: 11 district and city medical associations; 10 medical centers: the regional branch of the Center for Maternal and Child Health, the Mother and Child Diagnostic Center, the AIDS Center, the Children's Multidisciplinary Medical Center, the Perinatal Center, the
Reproductive Health Center, the Multidisciplinary Medical Center, the Cancer Center, the Rehabilitation Center for the Disabled); 5 dispensaries: narcology, neurology, dermatology, endocrinology, Zarafshan TB dispensary; 2 independent hospitals: Regional children's infectious diseases hospital, an ophthalmological hospital; 11 multidisciplinary central polyclinics; 39 family polyclinics; 55 points of family medicine; 9 stations of the State Sanitary and Epidemiological Supervision; 4 medical units; 2 dispensaries: the Metallurg dispensary from the Navoi Mining and Metallurgical Combine, the Khimik dispensary from the Navoiazot Production Association; 35 other institutions.

Considering the current trends in the development of the medical services market, it can be noted that, in comparison with other consumer markets, which significantly sagged in the previous three years, the medical services sector turned out to be resistant to turbulence.

During the period 2010-2020, the volume of the medical services market in Navoi region increased by 15.3 times and reached 72 billion soums. (Fig.1.)

In 2020, 34 hospital institutions operated in Navoi Oblast, of which 23.5% are institutions of small enterprises and microfirms. The number of hospitals increased by 9.7% compared to 2019.

The analysis of the hospital bed stock for the period 2010-2020 showed that the number of hospital beds decreased by 4.7% (from 4259 beds to 4055 beds in 2020), the number of hospital beds per 10,000 population decreased by 18% (from 50 in 2010 to 41 in 2020), the population per hospital bed increased by 22% (from 200 people in 2010 to 244 in 2020), the number of patients treated in hospitals increased by 21.8% (from 171.8 thousand people in 2010 to 209.3 thousand people in 2020), the number of bed-days spent in hospital facilities decreased by 0.4%.

Thus, the decrease in the number of hospital beds per 10,000 population by 18% - led to an increase in the capacity of the bed fund per hospital bed by 22% and...
a decrease in the number of bed-days spent by patients by 0.4%. The analysis of the main indicators of health care development in the Navoi region for the period 2010-2020 showed that the number of hospitals tended to decrease by 9.5% (from 42 in 2010 to 34 in 2020).

In 2020, the largest number of hospitals operated in the city of Navoi (15 units), in the Karmaninsky region (5 units), Khatyrchi region (3 units) and Navbakhor region (3 units). On the contrary, the minimum number of hospitals in comparison with other regions is observed in the city of Zarafshan (2 units), in Uchkuduk region (2 units), Kyzyltepa, Nurata, Kanimekhsky and Tamdynsky regions (1 unit each).

An analysis of the load of hospital beds in the territorial context shows that in 2020 the population per hospital bed is 528 people in the Kyzyltepa region, Khatyrchinsky - 484, in the city of Navoi - 90 people. This uneven workload of hospital beds seriously and negatively affects the formation of human capital and the quality of medical services. (Fig. 2.)

![Fig2. Population per hospital bed in 2019](https://www.navstat.uz/uz/)

The capacity of outpatient clinics for the period 2010-2020 increased by 7% (from 261 units in 2010 to 287 units in 2020), the capacity of outpatient clinics per 10,000 population decreased by 8% (from 261 in 2010 to 157 in 2020), the number of visits to outpatient clinics increased by 11% (from 9,042.2 thousand in 2010 to 10,026.6 thousand in 2020).

In 2020, the number of outpatient clinics was 287 units, of which 53.7% (154 units) are small businesses and microfirms. The number of outpatient clinics increased by 6.7% (by 18 units) against the previous year.

In 2020, the capacity of outpatient clinics increased by 3.3% compared to 2019. So, if in 2018 outpatient clinics could take 15.2 thousand people per shift, then in 2019 this figure was already 15.7 thousand people.
Along with this, in 2018, the number of visits by people to outpatient clinics in one shift was 9,604.1 thousand visits per year, in 2019 this figure reached 10,026.6 thousand visits per year.

If we analyze the number of outpatient clinics operating in the regions, then the largest indicator corresponds to the contribution of the city of Navoi (93 units), in the Karmaninsky region (38 units), Khatyrchi region (32 units), Kyzyltepa region (28 units), in the city of Zarafshan. (24 units) and in the Navbakhor region (22 units). On the contrary, the minimum number of outpatient clinics in comparison with other regions is observed in Nurata region (15 units), Uchkuduk (15 units), Kanimekhsky (13 units) and Tamdynsky region (7 units).

In 2019, the number of stations, substations and ambulance posts amounted to 55 units, compared to 2018 (54 units), it increased by 1.9% (1 unit). In addition, in 2019 the number of calls made reached 390.5 thousand. and compared to 2018, calls increased by 2.8%. In 2019, the number of people who received emergency medical care amounted to 592.4 thousand people, and if compared with 2018, it increased by 45.4%.

The human capital of medical personnel and the availability of medical services, the degree of coverage of the population with health services and their quality largely depend on the availability of qualified medical personnel, and it differs markedly across the regions of the country, and even across the regions of the region.

The concentration of medical institutions and medical workers in some regions and their shortage in others leads to different accessibility and quality of healthcare services, at least in terms of transport accessibility and waiting time. Lack or uneven distribution of human resources in the health care system, attracting and retaining specialists in remote, underpopulated and poorer regions is a serious problem for Navoi region.

If in 2010 2,625 doctors worked in the field of medical care, then in 2020 their number reached 2,899 people, i.e. the increase is 10%. The annual average growth rate was 1%. Compared to 2010, the number of nurses increased by 21% (from 11403 to 13673 people). The annual growth was 2.1%. (Fig3.)
If, in 2010, there were 31 doctors and 133 nurses for every 10 thousand people in Uzbekistan, then by 2019 there were 29 doctors and 137 nurses for every 10 thousand people. The dynamics of the load factor for doctors for every 10 thousand people increases by 7%, and for nurses decreases by 3%.

An analysis of the dynamics of the workload of a doctor and a paramedical worker shows that if in 2010 the workload for one doctor was 327 people, then in 2019 this figure is 341 people, i.e. each doctor's workload increases by 3% (Fig5). This greatly affects the quality of the medical services provided. On the contrary, the workload coefficient of nurses decreases by 4%, and this allows them to organize work more efficiently and efficiently.
When assessing the level of qualifications of doctors who work in state and commercial medical organizations, it is necessary to compare the structure of working specialists according to their qualification categories. Analysis of the dynamics of medical personnel by specialties shows that, in 2019 compared to 2010, a significant increase in the number of surgical doctors by 28.6%, dentists by 31.8%, neuropathologists by 69.2%, otaloringol by 59.4%, ophthalmologists by 48.6%, radiologists and radiologists by 76.9%, oncologists by 66.7%. But, as for obstetricians and gynecologists, the growth was only 3.4% compared to 2010.

Unfortunately, in 2019 there was a decline in the number of pediatricians by 24.6% and narcologists by 6.3 compared to 2010. If the current trend continues, then in 2025 there will be an acute shortage of obstetrician-gynecologists, pediatricians and narcologists.

An analysis of medical personnel by specialty shows that, in 2019, in the total number of surgeons - 18%, general practitioners - 18%, stamatologists - 17%, pediatricians - 10%, obstetrician-gynecologists - 10%. Unfortunately, the rest of the specialties range from 1 to 7%. (Fig.6)
In the Navoi region, there is a possibility of medical care for the population, both in private medical structures and in state organizations. Over the period from 2010 to 2019, one can observe a decline in 29% of state-owned organizations due to a reduction in outpatient clinics and a 2.1-fold increase in private organizations. (Fig. 7)

This trend proves that for public medical institutions, despite a number of advantages, it seems to us, the following disadvantages can be distinguished:
- the complexity of creating an effective system for the rational distribution of material resources, which is due to the establishment by the founder of restrictions on the disposal of the institution's resources in the conduct of economic activity;
- the impossibility of creating additional incentives for the introduction of new medical technologies that help reduce costs for certain budget items, due to the financing of the institution strictly according to estimated indicators;
- the existence of subsidiary responsibility of the state for the obligations of a medical institution creates conditions for the position of a dependent.

In accordance with the legislation of Uzbekistan, at present, the medical services market in Uzbekistan consists of the following segments: public, private and mixed. The presence of independence in the development of new types of medical services stimulates private medical organizations to be active, contributing to earning funds that can be used to purchase innovative equipment and increase wages, making them dependent on the final results of their activities. Nevertheless, commercial medical structures, if they want to effectively use the available resources, need to establish competent management of the medical organization and use the right methods to increase efficiency. At the same time, the limited resources available to commercial medical organizations should not negatively affect the culture of service and the quality of medical services.

Optimization of public medical institutions, as well as an increase in the share of paid services and, at the same time, a low level of service in the public sector have become key factors in the growth of the private medical services market. Note that public hospitals and clinics have officially received the right to provide paid services. That is why virtually the entire economically active population began to be involved in the system of paid medical services.

At the same time, paid medical care is a fairly new phenomenon for the health care system. The commercial sector of medical services is poorly focused on the treatment of complex pathologies, therefore, patients with cancer, organ transplantation and other severe cases have to seek treatment in the centers of the capital or go to foreign clinics for medical help.

Therefore, it becomes obvious that the future health care system consists in the development of the private medicine sector, in which all forms of ownership and mechanisms, including public-private partnerships, must interact. Modern trends in the development of the medical services market are focused on attracting commercial structures to create a comfortable environment for consumers of medical services by participating in compulsory medical insurance. By balancing the interests of the state and the private sector in the medical services market, an increase in the availability and quality of medical services can be expected.

The market for medical services, formed by private medical structures, operates according to the laws of business, forcing not only large companies, but also enterprises related to medium and small medical businesses, to set as their
main goal the provision of efficient operations and increasing profitability. The performance indicators of organizations in the medical field are determined by the effective management of resources that are used in health care. The task of management in the health care system is to manage the processes in such a way as to contribute to the reduction of morbidity and mortality rates of the population when using the directed resources. Obviously, private medical structures in the realities of today have to find a balance between ensuring effective activities with insufficient funding, in conditions of limited resources and maintaining a culture of service, along with the quality of medical services.

In our opinion, the general trends in the paid medical services market include: the expansion of the profile of medical care provided by private medical organizations, the further process of formation and consolidation of networks of medical organizations and the creation of branches. Single medical offices in the near future in many cities of the country will replace large multidisciplinary medical centers. The largest and largest cities of our country will be distinguished by an especially intensive development of the market for paid medical services.

In this situation, it is necessary to emphasize the specific feature of private medical structures, which consists in the fact that in the private sector of medicine, as a rule, doctors with high qualifications from state medical organizations conduct appointments. A significant part of specialists have to combine activities in public medical institutions with practice in private medical clinics, receiving high income from private appointments with extensive practical experience in public institutions, due to the colossal flow of patients, including those with exceptional cases.

Doctors now have the opportunity to use their personal experience in the medical field to treat patients in commercial medical structures, which is explained by the demand among patients and in private medical organizations for successful specialists. The relationship between the doctor's income and the quality of his life should also be emphasized: a doctor who has taken place and has strengthened his life positions with greater responsibility approaches patients' health issues, prescribes the required number of tests and conducts a thorough examination.

**Conclusion/Recommendations**

Thus, a medical service is a medical intervention or a complex of medical interventions aimed at preventing, diagnosing and treating diseases, medical rehabilitation and having an independent complete meaning.

The presence of certain peculiarities in the healthcare sector does not allow market mechanisms to effectively manage the market for medical services. The main factors that distinguish the medical services market from other markets and affect its formation and development are government regulation and human resources.
Analysis of current trends in the development of the medical services market allows us to draw the following conclusion: commercial medical structures in the medical services market still account for a very small share, which is due to strict requirements for participation in public-private partnerships and low cost recovery rates. Recruiting mainly experienced professionals, the level of the highest qualifications of which has not yet been officially recognized.

The need to regulate the market mechanism for the production and distribution of medical services is also caused by the presence of such circumstances that very often people with low incomes most need medical care.

Expenditures on the health care system imply the need for investments in the human potential of this area, which consist not only of the direct costs of training qualified medical workers, but also of the creation of pedagogical conditions and the means of professional self-determination of specialists in the field of medical services.

The shortage of general practitioners and narrow specialists in remote and hard-to-reach regions of the republic, insufficient practical training in medical educational institutions, as well as the weak introduction of modern forms and methods of organizing continuing professional education require urgent measures to further improve the system of training medical and pharmaceutical personnel, identify promising directions of its development for the medium term.

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