Health Economics and Management Review
Issue 1, 2022

ISSN 2786-4626 (on-line)
ISSN 2786-4634 (print)

https://doi.org/10.21272/hem.2022.1-04

JEL Classification: I15, M11, M12, M54

Stanislav Kotenko,
Sumy State University, Ukraine
https://orcid.org/0000-0001-8684-0163
email: s.kotenko@management.sumdu.edu.ua
Tatjana Tambovceva,
Dr.Sc., Professor, Riga Technical University, Latvia
ORCID ID, 0000-0002-9516-1530
email: tatjana.tambovceva@rtu.lv

Correspondence author: s.kotenko@management.sumdu.edu.ua

THE INFLUENCE OF THE COVID-19 PANDEMIC ON GENERAL TRENDS IN THE FUNCTIONING AND COMPETITIVENESS OF PRIVATE CLINICS

Abstract. *This article aims to examine the impact of the pandemic on competition in the medical services market of the Sumy region, which is ranked among the Ukrainian regions with small medical personnel and low socio-economic development. This study involved marketing research methods (surveys and content analysis), statistical methods for information processing, factor analysis, and alternatives analysis. The results unveiled the intense competition for patients and medical staff in the healthcare market of the Sumy region. The organization's competitiveness before the pandemic was assessed by factors such as «the doctors' treatment of patients and their qualifications» and «the availability of necessary medical services». During the pandemic, the essential factor in choosing a medical institution was «patient safety, reducing the risk of coronavirus». Before the pandemic, the competition between medical organizations was most influenced by the population paying capacity and the shortage of qualified medical personnel. Private clinics ranked below public clinics in delivering a wide range of medical services because of the lack of medical specialists. However, the pandemic has strengthened the position of private clinics through two factors. First, private clinics have expanded their range of services through narrow specialists who have moved from public institutions to private clinics. Second, private clinics have provided a higher level of client safety through a tight filter for patients with symptoms of coronavirus infection. Besides, using remote technologies by medical organizations has become a competitive advantage. The authors noted that remote technologies in healthcare are not common in the Sumy region and Ukraine in general, as patients distrust this service. This study is of practical value because it allows assessing the impact of global challenges on healthcare development in the regions to assess private medicine competitiveness changes. In addition to its practical value, private market research, especially in times of pandemic threat, confirms or rejects some theoretical hypotheses aimed at analyzing the performance of the private sector in health care facilities. This work opens new avenues for a deeper study of the similarities between private and public health facilities, especially in the face of legal and pandemic constraints.*

Keywords: pandemia, competitiveness, medical personnel, work motivation, private medicine.

Introduction. Healthcare remains one of the priority economic sectors for the country and its population. Currently, the medical services market is quite dynamic due to healthcare facilities of various organizational and legal forms and types of ownership, which actively compete with each other for the consumer. However, the development of the medical services market is heterogeneous. Besides, it depends on the regional socio-economic development. It stands to note that there is a shortage of highly qualified medical staff in regions with low average wages. In turn, it has affected the work of private medical organizations and their competitive relationships with public medical institutions. Therefore, this article attempts to investigate the impact of the pandemic on competition in healthcare in the north-eastern region

Cite as: Kotenko, S., & Tambovceva, T. (2022). The Influence of the Covid-19 Pandemic on General Trends in the Functioning and Competitiveness of Private Clinics. *Health Economics and Management Review*, 1, 31-38. http://doi.org/10.21272/hem.2022.1-04

Received: 22 February 2022 Accepted: 24 March 2022 Published: 31 March 2022

of Ukraine (Sumy region). Besides, the study determines the main indicators of the medical organizations' competitiveness before and during the pandemic. It finds factors influencing the competitiveness of private medical institutions.

Literature Review. The scientific background analysis revealed significant academic interest worldwide in the issues of the competitiveness of medical institutions. In turn, domestic authors widely explored various areas of medical services and their competitiveness. In this line, it is appropriate to mention Kaminska (2016), who studied the competitiveness of medical and recreational services in the private and public sectors of Ukraine. Bora (2020) described competition and competitiveness in the medical services market undergoing healthcare transformation. The scholar highlighted the need to measure and assess private medical businesses' competitiveness levels.

Gladkova (2021) described the factors of competitiveness of medical institutions in the context of the healthcare reorganization in Ukraine. It stands to mention that the reorganization period coincided with the COVID-19 pandemic.

In addition to scientists, competitiveness research is revealed in the qualification works of undergraduates of leading Ukrainian universities (Sichko, 2021). Thus, it indicates the importance and relevance of research on this topic.

In addition to the factors identified by scientists mentioned above, we can pay attention to the motivational factor. Together with the cultural component, these factors have a stimulating function in health care facilities during the pandemic crisis (Melnyk, 2021).

The factor of innovative development, as one that creates a significant part of the competitive advantages of health care facilities, is described by the scientist Danchak (2021). It focuses on the use of innovative techniques and tools in public and private health facilities. The level of competitiveness of medical institutions directly correlates with the level of innovation of institutions.

Methodology and research methods. This study used marketing research methods (surveys and content analysis), and statistical methods of information processing. Besides, the methods of analysis and synthesis, deduction and induction were used to estimate the change in demand for certain types of private clinic services during 2020-2021. Besides, to process the survey results and make conclusions, this work applied the methods of forecasting, expert evaluation, etc. The medical industry and health services have their own characteristics that distinguish their systems of service provision, financing and organization of activities, so the methodology for assessing their competitiveness should take them into account. A study by Gabueva (2016) and co-authors proposed the use of reputational audit in assessing the competitiveness of medical institutions, based on six main factors of competitiveness:

1. Orientation of the clinic to the interests of the patient;
2. Availability of competent specialists in the staff of the institution;
3. The level of equipment of the medical institution with equipment according to the profile;
4. Effective management;
5. Availability and reliability of information about the hospital;
6. Application of IT technologies (appointment, remote support of patients, receiving feedback).

Results. There is a challenging situation in the Ukrainian medical services market, including private clinics. Nowadays, planned doctor's appointments are forbidden, and the patients are scheduled to visit medical facilities. Some medical institutions restrict the flow of patients. Besides, they are not referred for examination in private medical clinics.

It stands to mention that this situation is complicated not only with coronavirus but various other viruses, including seasonal ones (ARVI, ARI, flu, seasonal allergies, etc.). Moreover, there is influence from chronic diseases (cardiac pathologies, spinal problems, etc.). The private clinics were almost 100% busy before the restrictions and self-isolation. Thus, many potentially private clinic-oriented patients cannot make an appointment (Gaponova, 2020).

The patient flow began to fall at the beginning of 2020, while in 2021, it decreased by 70%. Indeed, some health problems could worsen and exacerbate chronic diseases if healthcare is not delivered in time. In addition, it should be noted that the reduction of planned medical care would lead to medical institutions' work overload (Chorny, 2020).

If people do not visit a doctor in time, the disease often goes into a chronic phase. An ambulance has to be called, and if doctors suspect something serious. In this case, the patient would be taken to a hospital where he\she undergoes testing, including a coronavirus test. Noteworthy here, even if the coronavirus is not detected, the risk of catching it in contact with other patients increases. Therefore, the statistics of diseases are growing.

There is an expert opinion that the termination of coronavirus would be soon enough, but the current situation will lead to an outbreak of other diseases. When hospitals are cleared of coronavirus infections, untimely examination of other patients delays the medical care for patients with cardiovascular, neurological, and other diseases (Katerenchuk, 2021).

There is a need for a clear differentiation of patient flows between private and public medical clinics. Private clinics could accept patients who need to undergo current examinations and tests. It is necessary to organize the issuance of referrals to residents of the regions in private clinics.

During a pandemic, healthcare prohibitions and restrictions bust the budget of the private clinic since their income depends on the number of patients and provided services. It complicates the remuneration of medical staff labor or fixed costs (for example, MRI machines cannot be turned off like normal household appliances).

In the current medical services market situation, the question arises of whether the public medical sector will meet the population's needs if private clinics stop working and patients who were previously treated in private clinics go to the public health facilities? It could be suggested that public clinics will not cope with the loads, especially in the cities with a million-plus population (Kyiv, Kharkiv, Lviv, etc.). If all patients from private clinics go to the public sector, they will not be able to provide medical services on time. Delays could last for months or even years. In the post-COVID period, public hospitals and clinics would be under immense pressure to deliver medical assistance timely. If there are mass closures of private clinics, they can not cope. Therefore, the Ukrainian government must prevent bankruptcy and even the suspension of private clinics.

Even though the situation with the disease is changing rapidly, private clinics do not raise prices for their services. On the contrary, they spend more money on personal protective equipment. Every effort is made in private clinics to ensure that the patient has minimal risk of catching the coronavirus (Motruk, 2020).

The factors mentioned above influence the overall competitiveness of the private healthcare business in different ways. Since the main competitors in the market are public clinics and medical institutions, the main aspect is to provide quickly, safe, and sometimes unique services (tests and procedures such as computer tomography, radiographs, etc.).

This study conducted a survey of the management of 50 private clinics from all over Ukraine. The survey was conducted remotely in the form of a questionnaire. Figures 1-3 demonstrate the general indicators of private medical services market changes during the coronavirus pandemic.

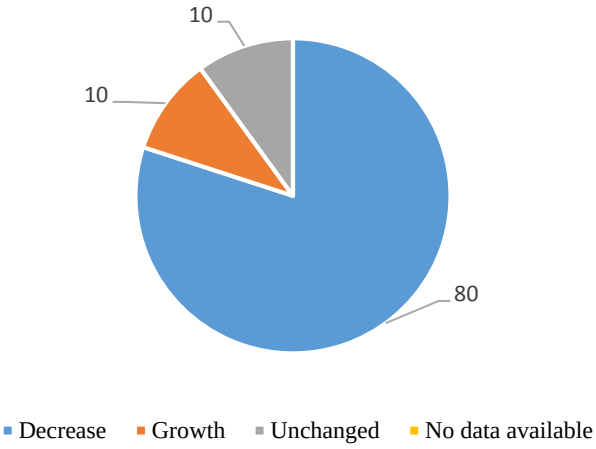

Figure 1. The difference in the purchasing power for medical services of private clinics (2020-2021)

Sources: developed by the authors.

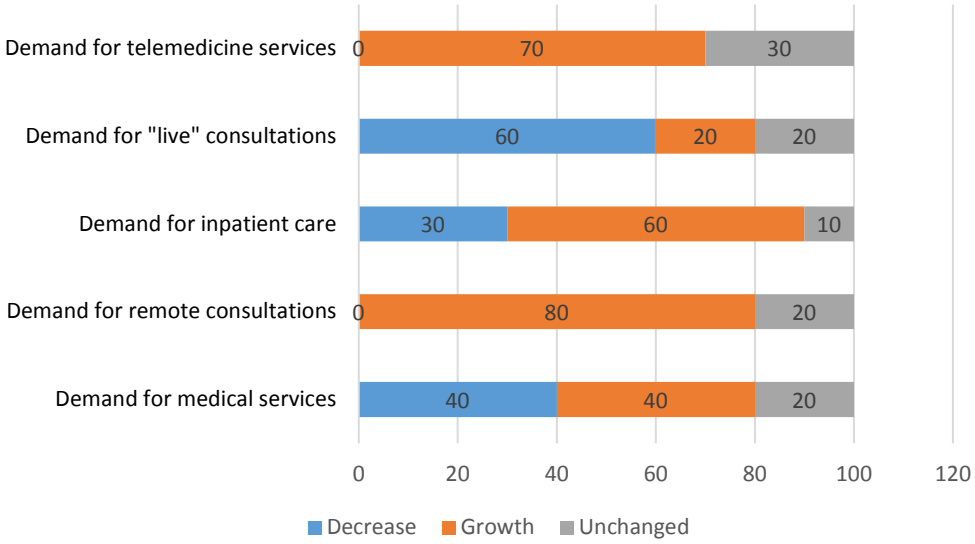

Figure 2. Demand difference for the private clinics' medical services (2020-2021)

Sources: developed by the authors.

In the survey findings of 50 managers of private clinics in Ukraine, 80% of respondents noted a decrease in clients' solvency and an increase in demand for remote consultations in 2020-2021. According to 70% of clinic representatives, telemedicine services have become more prevalent in the study period. More than 50% of respondents reported a decrease in the demand for face-to-face consultations.

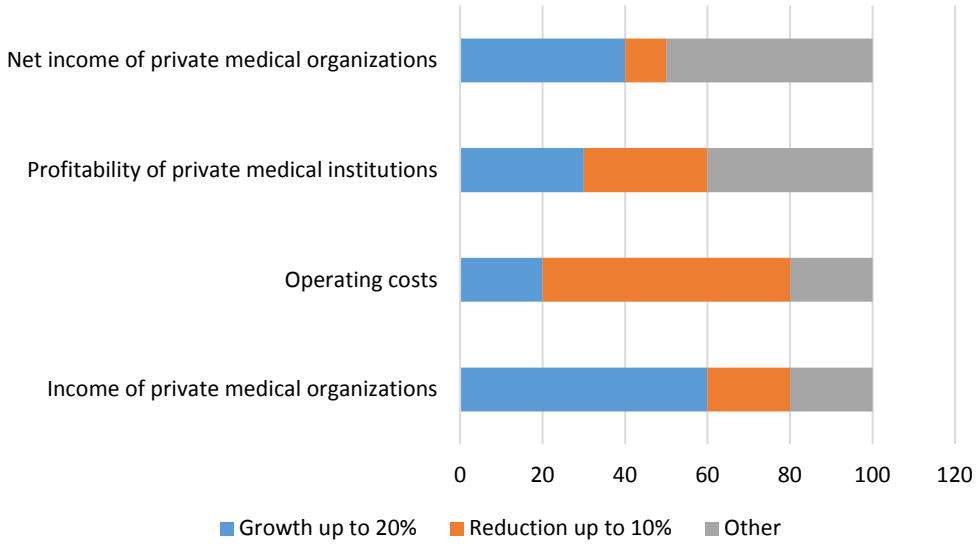

Figure 3. Changes in the main financial indicators of private medical institutions (2020-2021)
Sources: developed by the authors.

The financial performance assessment for 2020-2021 showed the respondents' responses were distributed primarily in equal proportions (10%). 60% of industry representatives reported an increase in revenue to 20% and a reduction in operating costs to 10%. 20% of respondents recorded a 20% margin rise in their medical organizations.

In addition to the general survey, the study assessed private medical organizations' competitive environment and competitiveness before and during the coronavirus pandemic in the Sumy region.

In the small population of the Sumy region (about 1 million people), there are many medical organizations with various forms of ownership competing for consumers and qualified medical staff. The provision of quality medical staff in the region is quite low. According to the Ministry of Health of Ukraine, the number of medical staff in the Sumy region is one of the smallest among the Ukrainian regions. It is influenced by the level of average wages in the region and the possibility of career growth (Skiba and Huseynov, 2021).

At the initial stage of the study, a survey of 200 residents of the Sumy region aged 19 to 68 who have secondary, secondary vocational, and higher education was conducted. Consumers of medical services had to assess the factors of competitiveness of the medical organization. In the scientific literature, certain factors have been identified that, according to experts, determine consumers' attitudes to medical organizations (Kotenko et al., 2021; Litvinov, 2016). The proposed factors were evaluated by patients on a scale from 1 to 5, where «1» is the least important indicator, and «5» is the most important indicator.

The average score of the factor was calculated as the arithmetic mean of all estimates. Table 1 presents the most significant factors.

Thus, patients evaluated the medical organization on a wide range of indicators. In turn, they considered the factors «attitude to the patient by the doctor and his qualifications» to be the most essential, while the least important – the cost of services.

At the same time, during the interview, patients admitted that if they choose to receive the service free of charge under the national health insurance or pay for it in a private center, they will receive it at public expense.

Table 1. Competitiveness factors significance assessment in public and private medical institutions

Factors	Mean score
Doctor's attitude toward the patient	4,29
doctor qualification	4,28
Quality of analyzes	4,24
Qualification of the mid-level health professionals	4,13
Supply of medicines, materials, and equipment	4,04
Treatment outcome	4
Range of services	3,5
Cost of services	3

Sources: developed by the authors based on (Kotenko et al., 2021; Litvinov, 2016).

Content analysis of the medical institutions' websites showed that most private organizations are present in a narrow segment of the medical services market. Only some private medical institutions provide a wide range of medical services. The reason for this is the shortage of narrow specialists.

Some work adjustments of private and public medical institutions were in 2020-2021. Public medical institutions of the Sumy region have suspended elective care delivery for patients with chronic diseases that do not require urgent medical intervention since 2020 because of the growing number of patients with COVID-19 and the treatment of patients with SARS. Due to the need to increase the number of specialists working with patients with new coronavirus infections and SARS, some narrow specialists were transferred to groups working with patients with symptoms of SARS (Chorny, 2020).

To provide medical care to coronavirus patients, large medical clinics and hospitals were reorganized into coronavirus hospitals under the requirements of the Ministry of Health of Ukraine. There was a reduction in personnel due to their transfer to treating patients with coronavirus.

Prohibitions on elective care in the public health sector have caused forced solvent demand in the private sector. Citizens have become more likely to seek medical help from private medical institutions (Titorchuk, 2021).

According to the survey, most private clinics were faced with an increase in demand for services in urology, proctology, gynecology, gastroenterology, otolaryngology, cardiology, and psychotherapy.

Some private clinics in the Sumy region decided to treat patients with coronavirus symptoms to adapt to the new coronavirus conditions and increase their income. As a result, the virus concentration increased, which caused the COVID disease among the staff. Therefore, the reception of patients was stopped. On the other hand, some medical institutions did not perform tests and received patients with fever and cough without additional income from the cost of coronavirus diagnosis. However, they maintained staff health and did not interrupt the outpatient process.

Patients concerned about maintaining their health considered the filter of patients with COVID symptoms and prevention measures (recirculation, mask mode, cleaning every 2 hours, etc.) as one of the most important competitive advantages of private medical institutions. In turn, there were many cancellations of visits by patients due to illness or fear of infection in public places (Kuznyak, 2020).

Several criteria and indicators could assess the efficiency and competitiveness of health care facilities and their structural units. Each of these criteria characterizes different aspects of the process of medical activity. In European countries, the main areas have been determined to identify competitiveness criteria:

1. Safety and support degree of medical workers.

The COVID-19 pandemic has put health workers in a challenging position. In addition to the heavy load, they are afraid to infect themselves and pass the infection to family and friends. The general atmosphere of concern affects medical workers and their mental health. The administration and staff of high-capacity hospitals need psychological support to cope with an excessive duration of change and high work intensity (Pomytkina and Ichanska, 2021).

2. Additional payment for work under rough conditions and additional days before vacation.

During the COVID-19 outbreak, many healthcare professionals have to deal with heavy workloads and stay at work for long periods without rest. In many countries, overtime work has become widespread due to the growing number of hospitalizations. In some countries, health workers have been denied the right to leave to ensure the continued presence of a sufficient number of physicians during the COVID-19 pandemic. Therefore, there is a necessity for fair working hours to balance the well-being of medical workers and the needs of the health service (Yavorovsky et al., 2020).

3. Cooperation between private and public healthcare.

Although the private sector is playing a growing role in providing medical services in many countries, the leading role of public healthcare in ensuring equal access to health care as a human right is particularly evident during the crisis (Trikoz, 2012).

4. Provision of up-to-date information on the main aspects of morbidity and strategies for its minimization.

The lack of general coverage of disease manuals is identified as one of the main challenges to successfully implementing coronavirus control strategies. The COVID-19 crisis reveals significant gaps in the scope of medical services and sickness benefits, depriving medical workers of protection.

Conclusions. This study showed that the essential indicator of the medical institutions' competitiveness is the indicator of «patient safety, reducing the likelihood of catching a coronavirus infection». It is valid for both private and public institutions.

The pandemic has contributed to developing new medical services areas based on remote technologies. However, remote medical assistance has not yet become a competitive advantage for medical institutions. To date, only two clinics have developed their applications. The demand for these services is still insignificant. People still want to see a doctor in person and discuss their problems. Besides, they are cautious with remote consultations.

Thus, the findings showed that the pandemic had strengthened the competitive position of private clinics, as they have managed to attract qualified medical staff, expand their range of services and maintain a high level of antiviral security.

Author Contributions: conceptualization, V. K., T. T.; methodology, V. K. ; validation, V.K., T. T.; formal analysis, V. K.; investigation, V. K.; data curation, V. K., T. T.; writing-original draft preparation, V. K.; visualization, V. K.

Funding: This research received no external funding

References

Bora, N. (2020). Competition and competitiveness in the medical services market in the context of the transformation of the health care system. Modern tendencies of development of science and education in the conditions of deepening, 279.

Chorny, O.V. (2020). State policy of health care transformation as a factor of social and economic stability during the COVID-19 pandemic in Ukraine. Scientific notes of TNU named after VI Vernadsky (Series: Public Administration), 31 (70), 108-112. Retrieved from [Link]

Danchak, V. Ya. (2021). Directions for improving the activities of health care institutions in the context of innovative development (Master's thesis). Retrieved from [Link]

Gabueva, L. A., Pavlova, N. F. & Sorokaletov P. V. (2016). Globalization of patient-oriented tasks in the development of health care in Europe: 87 German experience and opportunities for Russia. *Competitiveness in the global world: economics, science, technology,* (7). 79-94. Retrieved from [Link]

Gaponova, E. O. (2020). Current trends in the world market of medical services (Doctoral dissertation). Retrieved from [Link]

Gladkova, O. V. (2021). Factors of competitiveness of medical institutions in the conditions of reorganization of the health care system in Ukraine. *Pharmacoeconomics in Ukraine: status and prospects*, 48-49. Retrieved from [Link]

Kaminska, T. M. (2016). Competitiveness of medical and recreational services in Ukraine. *Economic Theory and Law*, (2), 14-24. [Google Scholar]

Katerenchuk, I. P. (2021). Review of the main provisions of the recommendations of the European Society of Cardiology for the diagnosis and treatment of cardiovascular diseases during the pandemic COVID 19 (2021) - epidemiology, pathophysiology and diagnosis. *Practitioner*, (4), 24-34. Retrieved from [Link]

Kotenko, S., Kobushko, I., Heiets, I., & Rusanov, O. (2021). KPI model impact on employee motivation and competitiveness of private healthcare facilities. *Health Economics and Management Review*, *2*(2), 31-42. Retrieved from [Link]

Kuznyak, T. (2020). The specifics of the competitive positioning of the health care institution in the market of medical services. *Ternopil: ZUNU*, 174-177. Retrieved from [Link]

Litvinov, O. (2017). Determining the factors of competitiveness of health care facilities in terms of innovative development. *Scientific Bulletin of Odessa National Economic University*, (4), 58-69. Retrieved from [Link].

Melnyk, A. A. (2021). Motivations for the component of development of the organization of culture of health care institutions. *Ukrainian Journal of Applied Economics*, 6(1). 280-289. [CrossRef]

Motruk, D. (2020). Empowering health facilities in the context of the COVID-19 pandemic. *Medicines of Ukraine*, 8(244), 56-57. Retrieved from [Link]

Pomytkina, L. V., & Ichanska, O. M. (2021). Features of coping behavior of medical workers during the COVID-19 pandemic. *Insight: the psychological dimensions of society*, (5), 148-161. Retrieved from [Link]

Sichko, G. V. (2021). Management of competitiveness of services of medical institution: qualification work for obtaining the degree of higher education «master»: special. 073 «Management». ChNU named after Petro Mogila. 90. Retrieved from [Link]

Skiba, O. O., & Huseynov, A. V. (2021). Trends of demographic indicators in the Sumy region in the conditions of the COVID-19 pandemic. Sixth Sumy scientific geographical readings: a collection of materials, 88. Retrieved from [Link]

Titorchuk, V. S. (2021). The specifics of the departments of anesthesiology and intensive care and features of nursing care for patients during the epidemic COVID-19 (Doctoral dissertation, Ternopil). Retrieved from [Link]

Trikoz, I. V. (2012). Using public-private partnership models in health care: foreign experience. *Bulletin of Berdyansk University of Management and Business*, (4), 60-64. Retrieved from [Link]

Yavorovsky, O. P., Skaletsky, Yu. M., & Brukhno, R. P. (2020). Questionnaire method as a tool for assessing the working conditions of medical staff and risk management in medical and biological emergencies (on the example of overcoming the COVID-19 pandemic). Retrieved from [Link]

Станіслав Котенко, Сумський державний університет, Україна

Тетяна Тамбовцева, д.е.н., професор, Ризький технічний університет, Латвія

Вплив пандемії COVID-19 **на загальні тенденції функціонування та конкурентоспроможність приватних клінік**

У статті проведено дослідження впливу пандемії на конкуренцію на ринку медичних послуг. Об'єктом дослідження було обрано Сумську область, яка за забезпеченням населення медичними кадрами та за рівнем соціально-економічного розвитку займає одне з останніх місць серед областей України. У цьому дослідженні застосовувалися маркетингові методи дослідження: опитування і контент-аналіз, і навіть статистичні методи обробки інформації. Також застосовували факторний аналіз, аналіз альтернатив. Результати дослідження дозволили сформулювати висновок, що у Сумській області у сфері охорони здоров'я існує напружена конкурентна боротьба як за пацієнтів, так і за медичний персонал. Конкурентоспроможність організації до пандемії оцінювалася факторами «ставлення до пацієнта з боку лікаря та його кваліфікація» та «наявність асортименту необхідних медичних послуг». В умовах пандемії найбільш вагомим, при виборі медичної організації став фактор «безпека пацієнта, зниження ризику захворювання коронавірусом». До пандемії на конкурентну боротьбу між медичними організаціями найбільше впливали два фактори: платоспроможність населення та дефіцит кваліфікованих медичних кадрів. Приватні клініки програвали боротьбу державним клінікам, оскільки через брак фахівців надавали менш широкий спектр послуг на платній основі. Пандемія сприяла посиленню позицій приватних клінік з допомогою двох чинників. По-перше, приватні клініки розширили спектр своїх послуг за рахунок вузьких спеціалістів, які перейшли з державних установ до приватних клінік. По-друге, приватні клініки забезпечили більш високий рівень безпеки клієнтів за рахунок жорсткого фільтру хворих із ознаками коронавірусної інфекції. Почасти стало конкурентною перевагою використання медичними організаціями дистанційних технологій. На даний момент дистанційні технології в медицині не поширені в Сумському регіоні та в Україні загалом, оскільки до цієї послуги пацієнти відносяться із недовірою. Дане дослідження має практичну цінність, оскільки дозволяє оцінити вплив глобальних викликів на розвиток галузі охорони здоров'я у регіонах, оцінити зміну ступеня конкурентоспроможності приватної медицини. Окрім практичної цінності, дослідження ринку приватних послуг, а особливо в часи пандемічної загрози, дає змогу підтвердити або відкинути деякі теоретичні гіпотези, направлені на аналіз діяльності приватного сектору закладів охорони здоров'я. Дана робота відкриває нові шляхи для глибшого дослідження подібності приватних та державних медичних закладів, особливо в умовах правових та пандемічних обмежень.

Ключові слова: пандемія, конкурентоспроможність, медичний персонал, мотивація праці, приватна медицина.