Marketing Research of Consumer Behavior in the Medical Service Market of Ukraine.

Robert Michit, Professeur UniMan CEFERH, Docteur Psychologie sociale et théologie morale directeur du laboratopire européen de la décision Grenoble.

Alexander Kvitashvili, Full Professor of Ivane Javakhishvili Tbilisi State University, ex Minister of Health, Labor and Social Affairs of Georgia, ex Minister of Healthcare of Ukraine

Ivan Klymnyuk, Doctoral Candidate of UniMan Academy of Management and Performance Grenoble, France

Abstract

This research presents medical services purchasing development conditions relative to private and professional needs in any country. The analysis develops commercial propositions following the law of supply and demand while including developing economic theory and respecting global equity.

Key words: health, healthcare, marketing, health plan, needs, well-being, medical services, medicine.

Preface

L'analyse des potentialités de la consommation de services médicaux du marché Ukrainien décrit une situation très opportune dans le sens où elle présente la possibilité à des patients d'avoir accès à une offre de santé plus adéquate et adaptée aux besoins et à des professionnels de santé d'avoir une la vitrine pour démontrer la valeur ajouté de leur savoir et savoir faire.

 Manifester les conditions d'une offre privée, attentive aux besoins et à la proposition de service correspondant à des budgets même modestes, relève d'une démarche fort intéressante, puisqu'elle pressente la « possibilité » d'un apport de soins mettant à disposition une qualité de traitement bien supérieure à celle qui est proposée dans les pays qui ont eu une administration de la santé insufisamment attentive à la créativité de l'offre.

Ainsi entrer dans une dynamique de l'offre et de la demande pourrait améliorer le service proposé puisque l'offre privée pourrait présenter un développement exponentiel dans la mesure où les usagers devenant les payeurs

modifient les critères de performance associant, en plus aux critères de quantité et d'économie, des critères de bien être qualitatif hautement subjectifs donc particulièrement efficaces dans une démarche marketing.

L'hypothèse fondamentale sur laquelle repose cette étude stipule que si le marché privé se développe il est raisonnable de s'attendre à ce que l'état se désengage peu à peu, à l'instar des modèles capitalistes et consuméristes, et donc entre dans sa vision d'économie proposant une gestion quantitative minimale pour répondre à une diminution des ressources que l'Etat aurait à engager dans ce secteur.

Cette hypothèse liée à la dynamique de l'offre et de la demande peut faire l'objet d'une étude plus approfondie pour mettre en évidence de façon plus claire la manière de faire advenir une privatisation de l'accès aux soins dans une démarche économique qui ne soit pas seulement tirée par les usagers fortunés mais aussi par les usagers en quête du service de santé de qualité apportant un mieux-être à vivre.

Dans cette même optique, une démarche marketing institutionnel auprès de l'état pourrait capter, dans un premier temps les fonds disponibles correspondant à l'enveloppe disponible. Dans le même, temps une deuxième forme d'actions pourrait capter les *« clients fortunés »* qui ont suffisamment d'argent pour aller *se faire soigner à l'étranger*. Cette manne serait une ressource en capital permettrait de réduire les coûts de l'offre et ainsi ouvrirait la porte pour aller solliciter progressivement la demande et les finances *publiques* qui vont *« se privatiser »* et celles privées qui vont *« se libérées »* au fur et à mesure que *l'offre* se développe et *se démocratise* avec le temps.

Robert Michit,

Analysis of healthcare service potential on the Ukrainian market describes a very favourable opportunity in that it presents patient's possibility to access a more adequate and adapted supply of healthcare services, catering to user's needs as well as those of healthcare professionals to gain a showcase to display the added value of their knowledge and know-how.

Implementing private supply conditions, respecting needs and a service offer corresponding to all levels of income, including the most modest, is a very interesting challenge. The possibility of acquiring healthcare services of a much higher quality level than those offered in a country with a minimal medical administration in terms of satisfaction and creativity is a very inductive factor.

Therefore, moving onto a supply and demand dynamic could improve healthcare services. A private offer could initiate an exponential development in that the beneficiaries now becoming payers, as well, and this will influence the performance criteria. These criteria include, as in the past, quantitative and monetary factors combined with new and highly subjective qualitative factors evolving into a very effective marketing philosophy.

The fundamental hypothesis underlying this research implies that if the private market develops, one can reasonably expect the state to disengage progressively, following the capitalist and consumerist models before them and therefore move towards an economic vision of minimal quantitative intervention combined with reduced resources from the state.

This hypothesis, linked to a supply and demand dynamic could introduce more detailed research clarifying the implementation process leading to healthcare privatisation and accessability for all and not only for the most economically advantaged and at the same time developing a para-medical and para-pharmaceutical offer for wellbeing.

Along the same lines, an institutional marketing process targeting state capital could attract, as a first step, available funds. A second simultaneous action could attract "wealthy clients" with enough money to acquire healthcare services in foreign countries. This financial abundance could be a mainstay resource reducing cost of the overall offer and progressively opening the doors of public finances looking to "denationalise" institutions and private finances searching for growth opportunities as the supply develops and becomes more democratic in time.

<div align="right">Robert Michit, Brian Crossman</div>

In the sphere of health care, *marketing* can be defined as the integration of pricing policy in the sectors of production, medical treatment and process planning; economic rationale for pharmaceutical and medical products, promotion and encouragement of the customer services. The services sector is one of the most promising areas of the national economy, and health care occupies a special place in this sector. Before Ukraine transited to market relations, management of the health care system was carried out using administrative methods since economic methods were not needed back then. Until now, this branch of economy was financed based on the number of beds, number of staff members, number of visits to a doctor, etc. Resources were assessed at the lowest cost estimates, and they were financed from the state budget. All these factors led to an excessive increase in the number of beds and hospital staff members. There was an inefficient use of resources and lack of incentive for further development. The solution to this is to find the way for both administrative and economic management to work in synergy. The most important objective of the health care

system is to help establish a balance and harmony between individual and public health.

A strict administrative policy should be used only for regulating the circulation of narcotic drugs, defining the rules/standards for managing medical records and to control resources used for feeding patients. All other authorities should be given directly to the management of medical institutions. Public health is perceived by society as an integral part of the quality of life, since it plays a major role in economic development of the state and ensures the renewed quality of workforce, which in turn lays the basis for social and economic development.

Efforts aimed at reducing government expenditures, enhancing control of insurance companies over the expense items and instilling ethical standards require additional external investments, which in turn leads to competition in the investment market. Commercial health care organizations have set themselves the goal of gaining profit, which directly depends on the quality of treatment. At the same time, public health care institutions are forced to survive competition; therefore, they need additional investments.

The transition to market relations and sequestration of public funds will lead to the use of marketing methods aimed at tying the client and the investor. Therefore, health care institutions are forced to use marketing methods to predict and study the client's needs that will ensure the institution's competitiveness.

Since Ukraine is currently establishing the commodity-money relations in the health care and services sectors, the implementation of marketing principles is imperative. Paid medical services will become the main instrument and product in the market. Since the supply of this service and its consumption are difficult to predict, the health care institutions have to focus on the demand management.

The high relevance of this problem and its insufficient coverage, lack of scientific literature on this subject and the need to develop practical recommendations for medical institutions have prompted us to choose this topic for research, the objective of which was to study the trends and patterns of processes in the Ukrainian market of medical services based on the marketing research, to

study the consumers' behavior and to outline the Ukrainian consumers' attitude to medical care.

Based on the objective of this research, we have set the following tasks:

- familiarization with modern concepts of medical services marketing and their critical analysis;

- to explore various scientific opinions about marketing in the services sector;

- to study the main indicators of consumer's behavior in the services market;

- to characterize the main elements of marketing in medical service;

- to analyze the world market of health care and the Ukrainian reality;

- to identify problems and contradictions in the medical services sector of Ukraine;

- to attract consumers to the sphere of medical services;

- to study the attitude of Ukrainian consumers to paid medical services;

- to identify the sources of information with regards to paid medical services;

- to determine the main trends and characteristics of the process of purchasing medical services;

- to find out the popularity and recognition of a medical institution;

- to create a social-demographic passport of the consumer.

This research represents the first comprehensive study of the Ukrainian medical market:

1. We have studied the world and Ukrainian markets of health care and identified the trends of their development at the current stage.

2. We have developed the methodology of marketing research of the consumer's behavior in the Ukrainian market.

3. We have identified the degree of involvement of the Ukrainian consumer in the sphere of medical services.

4. We have studied the attitude of Ukrainian consumers to paid services in the sphere of health care.

5. We have identified the sources of information that influence the consumer's opinion when choosing a medical service.

6. We have identified the main trends and characteristics of the product purchased by the Ukrainian consumer.

7. We have determined the recognition level and popularity rating in the Ukrainian market of medical institutions.

8. We have identified the criteria for choosing services of the family medicine.

9. We have discovered the desire of potential consumers to see marketing events being conducted in the Ukrainian medical market.

For a better understanding of the processes taking place in the Ukrainian market, we have reviewed the world medical market and identified the main vectors of development for the health care sector.

Medical care includes medical services that have many goals, and the following goals should be particularly noticed:

- length of life and prevention of premature death;
- fighting functional disorders and physical disabilities caused by illness;
- reducing discomfort from illnesses;
- reduction of disability;
- enhanced resistance to illnesses;
- enhanced activity of people in deepening their medical knowledge and enhancing their health care awareness.

In many countries, the health care structure depends on the country's resources and the stage of its economic development. It should be noted that the health care system should be flexible enough to enable it to promptly react to changes in the political system, economy and disease patterns. Taking this into account, 4 (four) major models could be named as the most commonly used in the modern world: the Semashko model, the Western model, the Mixed model and the

Primary Health Care model. There is no universal healthcare system that would simultaneously fit all the countries. Different countries have different levels of centralization and regulation, as well as the different roles of the insurance system. However, the general world trends allow us to assert the following:

- If medical insurance is available, it promotes general availability/affordability of medical services. In many countries practically everybody is insured, but the scope of services is limited;

- expenditures for health care development are the largest in the United States, but all countries tend to increasing their expenditures in this sphere, which in turn contributes to budget deficits, increases in taxes and reduced tax privileges;

- in countries where the emphasis is placed on state control, service waiting time becomes a problem for the population, as there are some barriers in place that regulate/ration the services;

- In countries where the health care system is efficient, this efficiency was achieved through the decentralization of state control, and by creating market-based mechanisms for cost-sharing competition, as well as through implementing the foundations for market prices and free choice;

- None of the countries is going to give up general medical insurance, but the apparent global trend implies a reduction in state control and transition of the health care business to market relations.

As for the national systems is concerned, we must admit that health care is different in every country. Some countries practice a single payer system where private insurance is not allowed and the patient cannot pay out of his own pocket. In other systems, the number of "players" is greater. Private insurance companies compete with each other, and the state plays the role of regulator and "diversifies" the level of subsidies.

After reviewing the world market, we have thoroughly studied the Ukrainian medical market, the peculiarities and sequence of the processes of its transition from administrative management model to market relations. At the moment, the transformation is not yet completed yet, and the transition processes

are quite painful for all the participants who take part in the establishment of medical service, regulation and for its consumers themselves.

Most Ukrainians live in fear of encountering their national health care system. Despite the fact that Ukrainian citizens pay almost half of the health care expenses out of their pockets (in addition to national taxes), they are forced to receive services that are provided using the out-of-dated infrastructure, without any guarantees of quality and respect for the rights and dignity of patients. Such organization of the system not only violates the constitutional human right to affordable and quality medical care, reduces health and life expectancy of the Ukrainians, but also impedes economic development and social cohesion of the society.

Executive and legislative branches of the Ukrainian government inherited the health care system that remained from the Soviet period – the Semashko model – and even distorted it. In this model, the entire system is state-owned and is focused on a hospital – with very fragmented management and services focusing on the treatment of acute cases with minimal preventive care efforts. This system is not intended to meet the real needs of the population, and it proved to be unable to respond to the immense burden since it was formed to fight infectious diseases and injuries that, in general, have the same cause and do not depend on personal behavior of an individual. This system was developed in those days when modern communication methods were not yet created and medical technologies were not developed enough. It also ignores international trends of modernization and improvement of the health care system. There is also a lot of evidence that this system is characterized by inefficient use of funds, which leads to corruption risks. Taking into account the established situation, a decision was made in 2014 on reforming the system of health care. *The Ministry of Healthcare initiated the development of a National Strategy for Reforming the System of Health Care in Ukraine. With the help of new strategic approaches to improving quality, as well as to enhancing availability of medical assistance and reducing financial risks for people, it was necessary to give new impetus to reforming this area. For the*

purposes of successful medical reform, the large territory and scale of Ukraine is an additional bonus, given all steps of the reform are properly administered.

The sources of financing health care in Ukraine include state and local budgets, charitable contributions of legal entities and physical persons/individuals, individual gratitude fees paid to medical personnel, and, less often, voluntary health insurance funds.

Lack of correlation between the financing of medical institutions and the final results of their work is a significant problem of the public health care system in Ukraine.

The rapid pace of the development of medical science and technology is not taken into account in the norms and standards either. Health care is a branch of the economy, which nowadays significantly depends on scientific and technological innovations. If technological development leads to changes in generally accepted medical practice, this should be reflected in the corresponding changes in the directions of resource flows.

Consequently, the existing system of itemized financing does not allow linking financial flows to the quality and quantity of services rendered, and such linking is a necessary element of modern approaches to effective management of the service provision system within the health care system.

Thus, the shortcomings of the current system of financing the health care sphere in Ukraine are as follows:

1.   Insufficient financing of the health care sector, which is manifested, among other things, by significant personal expenditures of citizens for medical services.

2.   Lack of the determined by law and relevant regulatory-legal documents List of Services that shall be provided by public health care institutions free of charge at each specific level of financing of these establishments.

3.   Lack of correlation between the financing of public health care institutions and the final results of their work.

4.   Impossibility of the efficient management of limited resources within the existing system of itemized financing of public therapeutic and preventive medical institutions.

5.   ==Financing of therapeutic and preventive medical institutions of different levels from budgets of different levels, which additionally complicates the coordination of assistance.==

According to the National Health Account's calculations, about $ 7-8 billion in cash circulate in the health care sphere of Ukraine. It is impossible to count the real amount of money since it is not being declared.

The development of the Ukrainian medical market depends on simplification of the tax system, implementation of the insurance system, rehabilitation of pharmaceutical manufacturers, under the European quality standards, and cancellation of oblast (regional) administration for access points to primary health care.

While doing a marketing assessment of the market, we can identify several areas to cover:

- study the consumer's needs and identify the needs that are not yet met at the moment.

- research the consumer's expectations;

- study the customer's perceptions (criteria for determining the quality);

- service control (calculating technical aspects of the service);

- study of operational methods of providing services and customer responses to them;

- explore the intermediaries of the service;

- explore the especially important clients;

- study the client's feedback regarding his/her expectations in correlation with the services received.

The medical services market is a combination of social and economic relations in the sphere of health care, where the terms "service" and "product" are not equivalent. It should be borne in mind that health care is not a solid single

product/commodity – it consists of numerous independent and varied components, just like every single medical service itself.

Marketing research is a permanent contact with clients, which helps to understand the mechanism used by consumers for evaluating the service before they buy it, while they receive it, and after the service is provided.

The selection of research methodology is aimed at determining the factor, which affects the consumer's decision when purchasing a service; it has to do with identifying the sources of influence on the decision making. Conceptual structure and place of reference is a model of consumer's behavior that is of practical importance to marketing managers and is a tool for forecasting when creating a marketing strategy.

In order to collect information for our marketing research, one of the basic methods of collecting information – questionnaire – was used along with the analysis of documents taken from official sources of the state institutions and interviews with experts in the areas of healthcare, economics, and sociology. For the purposes of studying the client's behavior, 1,078 people were interviewed, and most of them have answered all the questions included in our questionnaire. The advantages of this questionnaire were lack of any influence on the response and the wide spectrum of questions included. The disadvantages of the questionnaire were as follows: the reluctance of respondents to respond to open questions, the difficulty in qualifying the answer, and the fact that there were some questions with selective statements. The survey was conducted in handwritten and electronic versions through random selection of respondents. The questionnaire consisted of two parts, one having 49 and another having 21 questions.

Our marketing research has shown that 57% of 1,068 respondents use both paid and free medical services. Only 13.10% of respondents choose paid medical services only, and 20.22% use paid medical services because they don't have access to free services. 7.86% of the respondents use free services only. Based on these data, we can conclude that under the state medicine still in place, the

respondents, in most cases, choose paid medical services provided by private institutions.

The respondents' trust in paid or free medical services was distributed as follows: according to the 972 responses given, 39.50% of the respondents trust paid medical services, same 39.50% trust both paid and free medical services, and 8.60% do not trust any. It was difficult to decide what medicine to trust for 11.11% of the respondents. In spite of the declared free medicine in Ukraine, more than one half of the respondents choose paid medical services, since their trust in them is not less than in free medical services. As for the results related to free medical service, they get a different meaning after correct interpretation: "free/free of charge", in fact, means "payments made not through the cash desk". Based on this, the trust in paid and in free services is the same.

Answering the question "What induces you to use a paid medical service?", most of the 960 respondents selected several options. Most often (in 60.00% of cases), the promptness of services affects a person's choice. This is related to a voluntary exchange of money for the amount of time spent by patients and their relatives in order to resolve some bureaucratic organizational issues. This especially applies to the scheduled medical situations/deals and is less true for the urgent ones. Based on these three parameters, the majority of our respondents choose paid medical services – they guarantee prompt/timely medical services. The emotional component of purchasing the services, which takes into account the reputation of the institution (26.25%), is taken into consideration. As for the technical equipping of paid medical institutions is concerned, both the true facts and the results of our survey prove that there is no alternative to these institutions since it is impossible to get high-tech services at most of the state-owned medical institutions.

The quality of service means careful attitude (53.15% of the respondents) and promptness/timeliness of service (31.53%). Availability of the option to reserve in advance an appointment for doctor's consultation is important to 10% of

the respondents. Only a small percentage (1.80%) of the respondents pays attention to the visual appearance of a medical institution.

The respondents displayed their attitude to medicine as follows: out of 1,056 answers we received, the majority (63.50%) trust in live communication (in-person consultation with a doctor) for the purposes of solving their health problems. 18.75% trust their own experience; however, this percentage can be added to the previous one (consultation with a doctor), since experience is gained through patient's direct contact with the treating physician/counseling physician. At the same time, 2.50% of the respondents consult with medical literature and even less – about 2% of the respondents – listen to advice given by their close ones and relatives. The human factor plays a major role when dealing with health problems. Further decisions (consistency, scope and interpretation of the conclusions) are made based on a doctor's consultation, which on one hand indicates a high degree of trust in the medical specialists, and, on the other hand, proves the popularity of personal marketing in Ukraine. One fact really pleases: a percentage of those people who use alcohol or narcotic drugs to treat the disease and/or to blunt the pain instead of going to the professionals is very small. A very small percentage turns to religion, which indicates that religion does not interfere with the policy of medicine.

The majority of our respondents (26.30%) did not want to disclose the amount of money they spent for medical services since for the vast majority of Ukrainians their official salary is a minimal part of their total income. Most of those who answered this question are willing to purchase medical services from private health care institutions.

After we interpreted the responses to question "How would you spend $1,000 you won in lottery or received as a gift?", we noticed that only about 9.20% of 1,078 respondents were ready to invest this money in their own health; this is related to the superficial attitude of our people towards their health, and is not related to economic and social factors. It correlates with their lifestyle, which was shaped by free medicine and based on traditional approaches, as well as with lack

of personal responsibility for their own health. Most of the respondents (35%) would spend it on travel, which may be related to the latest political changes and visa-free travel.

Almost 2/3 of the respondents (62.50%) go to a medical institution for treatment and 51.25% – for medical examination. The percentage of those who go to a medical institutions for preventive purposes or for clinic medical examination/screening is minimal, it even smaller than the percentage of those who go to a medical institution just in order to get medical documentation (certificates). This once again proves that our people do not take their health seriously, and that the level of bureaucracy at all social institutions where medical certificates must be presented (and these certificates, in turn, are one of the sources of medical institutions' revenues) is still high.

More than one half (55%) of the respondents believe that the level of their awareness of the medical services market is average. And only 15% respond that they have a high level of awareness.

Medical specialists and own experience are the most important sources of information about medical services to more than one half of the respondents. One third of the respondents pay attention to the information they receive from their family members. The smallest role is played by advertising. This can be explained by the low level of marketing and incorrect advertising of medical institutions. The above figures indicate a high personal marketing of healthcare workers/medical specialists.

Most of the respondents pay attention to TV advertising and its printed version when choosing the insurance company. A smaller part of the respondents pay attention to radio advertising, advertising stands/rack cards and outdoor advertising, and the least number of the respondents pay attention to advertising on transport.

During our survey, the respondents had an opportunity to assess the sphere of medical services and evaluate them using a 5-point scale. After processing the data, we received the following results: the opinion about responsibility of medical

institutions was distributed quite evenly – from 16% to 24% for each point. Most of the respondents believe that medical institutions are more interested in their profit than in satisfying the needs and interests of their patients. The advertisement plays a minor role – because it is unclear/hard to understand and non-informative. At the same time, all our respondents think that it does not contain the information that is really needed/would be useful, as well as the majority of our respondents are not sure that advertising is truthful. On average, the majority of our respondents are satisfied with medical services. The right choice for our respondents is associated not with the range of services, but with the doctor's recommendations.

Our respondents believe that production of the product is the most promising sphere for investments (41% of the respondents). The sphere of health care, when considering as a potential industry for investment, is in line with tourism, trade, and construction. Our respondents think that the spheres of education and public catering would be the least successful for development.

Almost half of the polled (48%) think that the level of comfort at medical institutions of Ukraine is unsatisfactory, and only 4.90% are satisfied with it. Therefore, we can conclude that, unfortunately, medical infrastructure in Ukraine is not paid the required attention. The fact that the infrastructure of medical institutions is not ready to the transition to paid services reduces the quality of medical services, which, despite the high quality of the medical service itself, leads to a not very good impression of the medical service as a whole.

About one half of the interviewed (48.80%) use only paid medical services located near their homes, and 20% of them use free medical services located near their homes. Almost one third of the respondents say that they do not use medical services located near their homes, but they receive medical services not under the federal system. This proves the low efficiency of state/public medical institutions (primary outpatient clinics, polyclinics, etc.).

When determining the main trends and characteristics of purchasing medical services, we received the following results: 23.80% of 1,008 respondents rarely seek paid medical services, and 16.70% do this often. 20% of the

respondents seek paid medical services when they are in acute conditions. Analyzing the data, we receive the following results: half of the respondents use paid medical services only in urgent situations or less than once a year. Thus, respondents do not spend their own funds on the prevention and treatment of non-urgent illnesses.

To date, there are, de facto, no free medical services even at state-owned institutions. Half of our respondents pay for medical services at private institutions, while the other half spends money at both private and state-owned institutions or at state institutions only. All our respondents receive paid medical services regardless of the form of ownership of a medical institution. This testifies to the readiness for a complete transition to the economic model with the improved infrastructure and enhanced quality of service.

Only 7.60% of the respondents believe that the prices in medical institutions are low, while 40.5% of the respondents believe they are high. Almost half (51.90%) of the respondents believe that the prices for medical services in our country are average. The "high" and "average" responses derive from the low living wage and low salaries of the respondents. In other studies conducted parallel to our study, prices are considered low by those people who directly participate in the provision of medical services, and their share of earnings depends on the cost of services they provide.

Currently, 58.75% of the respondents believe that prices in medical institutions are adequate.

Most of the visits to a doctor fall on the primary level of medical care and the dentistry. According to the number of visits, only one fourth of the respondents needed in-patient services.

Our respondents have equally paid for services to both the cash desk and directly to the doctor. The share of payment by insurance companies is negligible; this may be due to the poorly developed insurance market and the fact that insurances do not cover dental services.

The medical insurance market is poorly developed in Ukraine, and this fact is reflected in the results of our survey. In fact (if we exclude corporate insurance), private health insurance packages are being used in very few separate cases.

Our respondents had an opportunity to evaluate (using an 11-point system) the components and the combination of factors that influence on their selection of medical institutions.

In most cases, our respondents select the quality of medical services and the professionalism of a doctor as the priority factors when choosing a medical institution. Reputation and popularity of the medical institution are the priority factors as well. In addition to the above-mentioned factors, the comfort of communication with medical staff is the next important moment. Availability of information about the services and the variety/spectrum of services take the next positions in the process of selecting medical institutions. The least attention is paid to the form of payment and, again, to the availability of the insurance policy.

Almost 2/3 (63.75%) of the respondents make their own decisions about medical services. The smaller percentage consult with their family members, and the minimum percentage of the respondents consult with their parents.

Only 1.20% of the respondents are not satisfied with paid medical services. The main part (52%) of the respondents is satisfied with the quality of services. The advantage of private medical institutions compared with the state-owned ones is high and average satisfaction of the consumers.

One third of the respondents (33%) who had negative experience dealing with paid medical services said that overpricing of these services was the first main reason of their negative perception and the unsatisfactory qualification of a specialist was the second main reason. Taking into account the percentage of those dissatisfied with medical services, and comparing with the responses to previous questions, we noticed that the respondents who have chosen one or another medical service emphasize the importance of three things that determined their choice: adequacy of diagnostic methods, normal attitude [of medical personnel] to

their business, and interest [of medical personnel] in getting good outcomes of the medical treatment.

The level of respondents' satisfaction with the quality of services they received – from primary health care to a highly specialized level – is mediocre. In most cases, the institution of a family physician who at the current stage replaces several specialists and covers the diagnosis and treatment, as well as the issuance of documents/certificates (which is equivalent to polyclinic services), has received the highest rating. After processing the results of our questionnaires, we may predict further development of the institution of a family physician, and the expansion of its authorities, which is promoted by the proposed reform. Most often, an "unsatisfactory" assessment was received by ambulance and polyclinic services, which indicates the urgent need for modification and improvement of these services.

According to the poll, the quality of medical services is considered to be the most acute problem in the sphere of health care. If we look at the pharmaceutical market, we will see that prices of both foreign and local producers are high (as 35.44% of our respondents stated). The following conclusion can be drawn from the above: the primary problems in the area of health care are the quality of services (which, in turn, is due to a shortage of professional personnel), and lack of modern medical technologies (which, in turn, slows diagnosis and treatment, as well as hinders the prompt resolution of problems. The problem of accessibility/affordability/availability means both high prices and the wrong federal structure of medical institutions. Due to the deficit of marketing thinking, both the society and management of medical institutions are not yet ready for marketing actions.

When identifying the level of recognition of national and private medical institutions, many factors could affect the decision of the respondents: verbal and TV advertising, personal experience, any information about medical institutions – ranging from their location to their medical processes. Despite the fact that some interviewees never received medical services at the institutions they selected, they

have general information about the activities of these institutions. One private clinic has become one of the top three leaders in this ranking, indicating the readiness for transiting to the market model, since there is already an example of a successful implementation of market relations in the medical sector against the background of competition with large multi-profile medical agglomerations funded by the state.

The level of recognition [of medical institutions] among our respondents matches the rating of medical institutions, which testifies to the immaturity of consumers and their unpreparedness/unwillingness to switch to new information and marketing systems when purchasing services. The problem may be the imposition of stereotypical concepts with regards to medical services – both to the services as such (in general), and to the perception of medicine, as a whole, as part of the services sector.

To most of those who applied for a medical service (42.67%) a specific treating physician was the first preference [in selecting a medical institution], and 28.15% relied on their previous personal experience. A close proximity of the selected medical institution to their place of residence influenced on the choice of 14.67% respondents. A small percentage of our respondents paid attention to the cost of services and the availability of insurance policies.

Most of the respondents may change and/or are ready to change their medical institution if they receive a better service.

64% of the respondents are satisfied with the medical institutions they are currently using; this is based on the fact that the respondents receive services at private medical institutions.

In 35% of cases, a medical institution is not capable of providing all the services required for the complete and continuous provision of medical care (diagnosis, treatment and rehabilitation).

When evaluating Ukrainian medical personnel, a professional advice is fundamental to the consumer. Other components – discipline, sense of responsibility, efficiency and communicativeness, patient's trust, quality of

medical services, and interest in the problem – are evaluated mediocre. Of these, greater attention is paid to the quality manipulations performed, and to the image.

A small number (19%) of the respondents uses services of the family medicine, while the majority of them (81%) have never used this service. This is despite the fact that (as the above stated results indicate) the majority of our respondents positively assess the institute of family medicine. Implementation of family medicine will enhance the speed of service and increase the number of satisfied consumers, as it covers many options/areas of medical service.

13% of respondents are ready to spend up to UAH 1,000 (30.77 €) a year on a family medicine service, and 14% - up to UAH 5,000. (153.85 €)

Half of respondents have not decided their answer, because prices for medical services are not stable and it is difficult to calculate the budget before receiving the service. A very small percentage (only 5%) noted that they had no money to pay [for this service].

Half of the respondents use services of polyclinics located near their places of residence. There are currently no alternate ways of receiving free medical care other than this. Also, the client goes to a polyclinic in order to obtain a permit for a follow-on medical service, and half of them [go there] only for the purpose of getting medical documentation needed for a follow-on treatment at other institutions. A polyclinic is the primary link of health care, which is due to a large number of requests for medical assistance. Negative assessment is given to the qualification of physicians, nurses and junior medical personnel, as well as to the cleanliness and sanitary conditions of state polyclinics, which directly affects the quality of medical services in general. The other half [of the respondents], which does not use polyclinics, chooses an alternate primary link (a private medical institution). Those respondents, who seek selective medical services, pay special attention to technology and equipment, since medical examinations and diagnostics constitute the lion's share [of such services].

Studying the social passport of our respondents, we received the following data: according to the results of our survey, 17.50% of our respondents were aged

20-24 years old; 45% of them were aged 25-34 years old; 26.25% were 35-44 years old; 8.75% were 45-54 years old, and 2.5% were 55 and older. 34% of them were male and 66% were female; 68.30% of the respondents have higher education, and 8.50% completed secondary school; the remaining respondents are still studying. By their place of work, our respondents distributed as follows: 21% of them work at state institutions; 28.40% of them work at private institutions; 19.75% of them are private entrepreneurs/self-employed; 8.60% of them are employed by international organizations, and 22.25% of them have other forms of employment, or are unemployed. By their affiliation to a certain social category, our respondents were distributed as follows: 35% of the respondents are specialists; 17.5% of the respondents are businessmen/entrepreneurs; 12.5% of the respondents are managers and another 12.5% of the respondents are students. The least covered by our questionnaire categories include pensioners/retirees (only 1.25% of the respondents) and military personnel – same 1.25% of the respondents, and unemployed – 6.25% of the respondents. 42.50% of the respondents have their total monthly income more than 20,000 UAH (615.38 €). 17.8% of the respondents make up to 20,000 UAH (615.38 €), and 15% of the respondents make up to 15,000 UAH (461.54 €). 25% of our respondents have a family budget of up to 10,000 UAH (307.69 €).

In order to meet the demand and to achieve competitive environment, all organizations working in the healthcare sector must know what indicators are important to the consumers who purchase services, and what is the percentage of each of these indicators when evaluating the system in the framework of competition.

Activities of the healthcare system are changing, taking into consideration the needs of the market.

Unfortunately, the healthcare system in Ukraine is barely oriented toward the events occurring on the market. The reason to this is lack of knowledge about the consumers' needs and the imperfection in systematic market analysis. Awareness of the client's wishes and expectations and permanent marketing

research are mandatory; this will allow determining the criteria used by the consumers when buying a specific service.

It is quite difficult to compare two or more clinics for the purposes of determining the competitiveness. In some separate cases it happens that one company is better than the other by all criteria. Of course, it is easy to draw conclusions and to compare the competitiveness in such cases. However, different companies have different performance indicators, and it is difficult to assess the competitiveness. There is only one solution: the assessment should be based on the weight of separate indicators. Hence, the determination of the indicator's weight coefficient plays the key role. In this research, we have applied the marketing model of studying the market for the purposes of ranking the competitiveness indexes; it is based on the method of prioritization – where the consumers' opinion is reflected through the method of paired comparison.

According to the outcomes of our research, we have determined that the main indicators of a medical service could include the following: Image of the Company (x_1), Quality of Service (x_2), Qualification of Personnel (x_3), Cost/Price of Service (x_4), Diversity of Services (x_5), Company Recognition Level (x_6), and Efficiency of Marketing Services (x_7). The values are competing with each other in the process of assessment. Consumers may imagine the assessment results in the form of a system, which compares the pairs of indicators. The above mentioned indicators are marked, where i = 1 …n (n – is the number of indicators). If x_i exceeds x_j for a given indicator, then we write that $x_i > x_j$, and when x_i is characterized by the less important indicator, we write that $x_i < x_j$. An equal i correlation is also possible , then $x_i = x_j$. The total number of comparison is expressed by *M*. M is calculated using the formula: M =(n x (n-1)):2

where n – is the number of indicators, in our case – 21.

The priority of such formulation is the fact that evaluation of each indicator is not included in a consumer's functions. As it was noted, the comparison of pairs reveals the absolute priorities of indicators. The system of points requires transiency (if a > b and b >c, then a > c). The comparison of pairs does not require

If the difference between a, b and c is minimal, the consumer does not distinguish them, and we write that a = b. However, if the difference does exist: a >c i b<c, this makes the system transitory/transient.

1. Placing of the privileges as given by the consumers.

№		>	<	=
1	$X_1 X_2$	144	516	264
2	$X_1 X_3$	144	492	288
3	$X_1 X_4$	276	432	216
4	$X_1 X_5$	252	408	264
5	$X_1 X_6$	348	228	348
6	$X_1 X_7$	300	276	348
7	$X_2 X_3$	336	168	420
8	$X_2 X_4$	516	192	216
9	$X_2 X_5$	540	204	180
10	$X_2 X_6$	600	168	156
11	$X_2 X_7$	648	204	72
12	$X_3 X_4$	600	108	216
13	$X_3 X_5$	636	120	168
14	$X_3 X_6$	600	132	192
15	$X_3 X_7$	648	168	108
16	$X_4 X_5$	360	312	252
17	$X_4 X_6$	432	300	192
18	$X_4 X_7$	348	324	252
19	$X_5 X_6$	336	360	228
20	$X_5 X_7$	348	312	264
21	$X_6 X_7$	276	132	516

We received the following system:

$X_1 < X_2$; $X_1 < X_3$; $X_1 < X_4$; $X_1 < X_5$; $X_1 > X_6$; $X_1 > X_7$;
$X_2 > X_3$; $X_2 > X_4$; $X_2 > X_5$; $X_2 > X_6$; $X_2 > X_7$;
$X_3 > X_4$; $X_3 > X_5$; $X_3 > X_6$; $X_3 > X_7$;
$X_4 > X_5$; $X_4 > X_6$; $X_4 > X_7$;
$X_5 > X_6$; $X_5 > X_7$;
$X_6 > X_7$.
The system is non-transitory/non-transient.

2. A square matrix is built, which includes the following components:

$$a \begin{cases} 2, \text{if } X1 > Xj \\ 1, \text{if } X1 = Xj \\ 0, \text{if } X1 < Xj \end{cases}$$

X	X_1	X_2	X_3	X_4	X_5	X_6	X_7	P(1)	P(2)	P(relative)
X_1	1	0	0	0	2	1	4	26	22	0,075
X_2	2	1	1	2	1	2	2	14	71	0,234
X_3	2	2	1	2	1	0	1	10	60	0,093
X_4	2	2	2	0	1	2	1	8	43	0,041
X_5	2	1	2	1	0	1	1	5	48	0,097
X_6	0	1	1	0	1	1	1	7	29	0,056
X_7	1	0	1	1	1	1	1	5	30	0,098

Determining the integrated value.

If the integrated force X_1 – we mark $P_i(1)$, it represents the sum of points.

$$P_i(1) = \sum_{j=1}^{n} a\mathrm{ij}$$

The second-order integrated force is calculated by the forces of opposite values.

$$P_i(1) = \sum_{j=1}^{n} aij P_j(1)$$

$$P_1(2) = 1 \cdot 4 + 0 \cdot 11 + 0 \cdot 9 + 0 \cdot 8 + 0 \cdot 5 + 2 \cdot 7 + 1 \cdot 5 = 23$$

$$P_2(2) = 2 \cdot 4 + 1 \cdot 11 + 1 \cdot 9 + 2 \cdot 8 + 1 \cdot 5 + 2 \cdot 7 = 73 \text{ and so on.}$$

The values of $P_i(1)$ i $P_i(2)$ are given in the table above

For the purposes of ranking the i index, we introduce an integrated relative index K of the $(P_j^{relative}(K))$ order, which can be calculated using the formula:

$$P_i^{(relative)}(K) = P_i(K)/\sum_{i=1}^{n} Pi(K)$$

Provided that $\sum_{i=1}^{n} Pi(relative)(K) = 1$

After determining the priority the following values are used

X_1	X_2	X_3	X_4	X_5	X_6	X_7
0,075	0,239	0,193	0,141	0,095	0,157	0,098

During the ranking:

X_2	X_3	X_6	X_4	X_7	X_5	X_1
0,239	0,193	0,157	0,141	0,098	0,095	0,075

We determine the correlation between the extreme members of ranking:

$$K_p = \frac{Xi\ max}{Xi\ min}$$

where $Xi\ max$ – is the indicator with maximal value;

Xi min – is the indicator with minimal value.

$$K_p = \frac{0,239}{0,075} = 3,2$$

Determining the final indicators of competitiveness.

For practical application, the use of variable a_{ij} coefficients is more acceptable for the methods of placing the priorities. On the IV stage, by K_p the a_{ij} are determined, and the square matrix is built, the members of which:

$$a_{ij} = \begin{cases} 1 + \text{yh, if Xi} > \text{Xj} \\ 1, \text{if } 1, \text{if X1} = \text{Xj} \\ 1 - \text{yh, if X}i < \text{Xj} \end{cases}$$

In order to determine *y*, we determine (in advance) its pre-value y^h, which is calculated as follows:

$$y^h = \frac{Kp-1}{Kp+1} + \sqrt{\frac{0,05}{n}}$$

in our case:

$$y^h = \frac{3,2-1}{3,2+1} + \sqrt{\frac{0,05}{7}} = 0,6$$

Based on y^h, the matrix is built, the members of which are:

$$a_{ij} = \begin{cases} 1 + \text{yh, if Xi} > \text{Xj} \\ 1, \text{if } 1, \text{if X1} = \text{Xj} \\ 1 - \text{yh, if X}i < \text{Xj} \end{cases}$$

X_i	X_1	X_2	X_3	X_4	X_5	X_6	X_7	$P_i(1)$	$P_i(2)$	$P_{i\ relative}(2)$
X_1	1	0,4	0,4	0,4	0,4	1,6	1	5,2	36,6	0,105
X_2	1,6	1	1	1,6	1	1,6	1,6	9,4	64,4	0,195
X_3	1,6	1	1	1,6	1,6	0,4	1	8,2	56	0,170
X_4	1,6	0,4	0,4	1	1,6	1	1,6	7,6	48,4	0,147
X_5	1,6	1	0,4	0,4	1	0,4	1	5,8	38,4	0,117
X_6	0,4	0,4	1,6	1	1,6	1	1	7	48,7	0,148
X_7	1	0,4	1	0,4	1	1	1	5,8	38,8	0,118

Based on the received priorities, we determine the correlation between the extreme values, i.e. $K_{relative}$, we calculate using the formula:

$$K_{relative} = \frac{0,195}{0,105} = 1,8$$

In case $K_p = K_{relative}$, y^h will be considered as the y value, and the issue of constructing priorities will be solved. Otherwise, y^h shall be corrected using the *a* coefficient.

$$y = y^h \bullet a$$

where $a = \dfrac{Kp}{K \text{ relative}}$

in this particular case $a = \dfrac{3,2}{1,8} = 1,8$

$$y = 0,6 \bullet 1,8 = 1,08$$

From the received results for *y*, we build a matrix, which clearly shows the weight/importance of each indicator in the entire structure.

X_i	X_1	X_2	X_3	X_4	X_5	X_6	X_7	$P_i(1)$	$P_i(2)$	$P_{i\ relative}(2)$
X_1	1	-0,08	-0,08	-0,08	-0,08	2,08	1	3,76	20,49	0,068
X_2	2,08	1	1	2,08	1	2,08	2,08	11,32	74,58	0,250
X_3	2,08	1	1	2,08	2,08	0,08	1	9,16	59,46	0,199
X_4	2,08	-0,08	-0,08	1	2,08	1	2,08	8,08	41,41	0,139
X_5	2,08	1	-0,08	-0,08	1	-0,08	1	4,84	26,88	0,090
X_6	-0,08	-0,08	2,08	1	2,08	1	1	7	47,84	0,160
X_7	1	-0,08	1	-0,08	1	1	1	4,84	28,05	0,094

In accordance with these data, we can determine the order, which shows what exactly affects the purchase of a medical service at the time of its delivery:

1) Quality – coefficient of weight/importance 0,250;

2) Qualification of Personnel – coefficient of weight/importance 0,199;

3) Recognition – coefficient of weight/importance 0,160;

4) Price – coefficient of weight/importance 0,139;

5) Efficiency of Marketing Methods – coefficient of weight/importance 0,094;

6) Diversity of Services – coefficient of weight/importance 0,090;

7) Image of the Company – coefficient of weight/importance 0,068.

Our research showed that Ukrainian consumers prefer the quality of services, qualification of personnel and diversity of services, and they do not have the information about a significant role of marketing techniques in obtaining quality services, i.e., they have no idea how demand is being formed.

As for the private clinics is concerned it is vitally important to them to conduct effective measures in the services sector aimed at informing the consumer in order to get advantages that will help them to consolidate their position on the market.

Mathematical model for identifying the best medical institutions in Ukraine

The marketing research aimed at determining the best medical institution of Ukraine included 5 stages.

I stage – the respondents rated 14 medical institutions from 1 to 14.

II stage – ranking of medical institutions was done. $(x_1, x_2 \ldots x_{14})$. The veracity of ranking was calculated using the formula:

$$\sum_{i=1}^{n} r_i = \frac{n(n+1)}{2}$$

where n – the number of the rated institutions

r_i - ранг відмічених на показниках i

for our data, in 14 cases $\Sigma_{ri} = 78$

III stage – determining the coherence level of our respondents.

We calculated the coherence of thoughts of our respondents using the coordination coefficient W. We first determined the difference (Δi) between the sum of ranks of the factors and the mean sum of ranks.

$$\Delta i = (\sum_{j-1}^{m} d_{ij} - \sum_{i-j}^{n} \quad \sum_{i-j}^{m} \quad) / n$$

where d_{ij} – оцінка медичного закладу варіантів і рангу в j-рейтингу;

where m – the number of ratings;

n – number of institutions being compared, Δi – deviation of separate/individual parameters from the mean.

After this we calculated the square deviation $(\Delta i)^2$, which is mandatory for calculating separate/individual parameters from the mean [parameter].

In case the related/tied ranks/зв'язаних рангів exist, the coordination coefficient is calculated using the formula:

$$W = S / (\frac{1}{14} m^2(n^3 - n) - m \sum_{j=1}^{m} T_j)$$

where $S = \sum_{i=1}^{m} (\Delta i)^2$ – a sum of squares of deviation,

$$T_j = \frac{1}{14} \sum_{j=1}^{m} (t_j^3 - t_j)$$

where t_j - <mark>є кількістю рангів зв'язаних в j - рангуванні</mark>.

According to the mathematical statistics, the coordination coefficient varies from 0 to 1. If it = 1– we have a full consent of the respondents, and if it = 0 – then we have a complete dissent of the respondents. The coordination coefficient should be equal 0,5 in order to consider it a "positive". In our case W = 0,48, which is considered acceptable.

IV stage. In order to verify the values of the coordination coefficient and the coherence of the respondents, we used the x^2 distribution (the Pearson's Criterion), which is calculated using the formula:

$$X^2 = S / \left(\frac{1}{14} mn(n+1) - \frac{1}{h-1} \sum_{j=1}^{m} T_j \right)$$

The hypothesis about acceptability of the coherence of respondents may be accepted in case<mark>, коли для рівнів 5 % заданої кількості вільних ступенів, значення x², визначене в таблиці, менше розрахункового</mark>. This means that $x^2_{tab} < x^2_{calculated}$. In our case $x^2 = 62,9$.

In order to successfully carry out marketing activities on the Ukrainian medical market, it is mandatory to determine the needs of a potential consumer on the basis of topology. The described in the scientific literature methods of forecasting the needs are mainly based on the determining the level of income of the population. Unfortunately, official statistics for Ukraine are not true, because they do not reflect the real income. Therefore, the methods of forecasting that are based on marketing research and questioning are considered the priority ones. It is obvious that in the current realities the long-term and medium-term forecasts will not be needed, and preference should be given to the short-term forecasts. Without taking into account the differentiation, it is not possible to sell on the market those services that are interesting to a specific group of consumers. To this end, the preference is given to the market segmentation, where the separate groups that specify or determine identical requirements to the product (service) can be defined from the total number of potential customers. Geographic, demographic and

psychographic indicators are used for the consumer market. Traditionally, the marketers use only geographic and demographic indicators; however, this is not enough to identify the target groups in the Ukrainian market. Such psychographic segmentation enables us to better determine the consumer's behavior, as well as such indicators as lifestyle and values that help us to more accurately identify the target group. The buyer's interest in the service (product) often determines the lifestyle, not the statistical parameters of the individual's mentality, interests and social status. In many countries of the world, special methodologies (VALS) are used to measure the lifestyle. Due to these methodologies, 4 groups of consumers are identified:

1. Customers who are driven by their needs. This is the poorest stratum of the population with no education, which spends money not according to their desires but when necessary.

2. Consumers who are driven by the factors; they pay attention to public opinion.

3. Consumers who are driven by internal factors, those to whom their personal needs and desires are important.

4. Integrated consumers who combine the best qualities of the previous two groups.

According to the VALS II methodology, consumers are divided into 3 groups:

1. Consumers who are focused on principles. They take into account only their own opinion when buying a product or a service.

2. Consumers who are focused on the status. It is important to them that other people endorse their choice.

3. Active consumers, those who oriented towards active actions. They are driven by social and physical activity with the variety of feelings and risks.

There is a quite interesting Russian methodology for determining the consumer's lifestyle. It is named R-TGI (RussTargetGroupIndex). It is based on the Russian index of target groups and is used in Russia since 1995. R-TGI is an

adapted version of the British TGI and is the source of information for the largest companies. For the purposes of forecasting the consumer market, there is a method for monitoring a consumer's behavior. It allows simultaneously calculating the projected/forecasted needs by the types of consumers and the types of services. This type of forecast is short-term and is more effective.

An adapted version of this method can be applied for the Ukrainian market, taking into account its instability. The Ukrainian model consists of three stages of identifying the lifestyle of Ukrainian consumers.

Innovators are the youngest group with the highest income, progressive views, good taste and a high level of activity. They are more likely to buy medical services. The main thing to them is to create their own status and image. The innovators have high requirements for the quality of medical services, but this is what they are ready to pay for. They often refer to online advertising and glossy magazines. At personal contact with these consumers, more attention should be paid to the quality of service.

Successful - this group is close to the innovators, but they are more scrupulous toward financial issues. They are happy with their social status; they always follow the news and quickly "master" new medical services. Consumers of this group choose medical institutions by their image.

Determined - the largest group of the respondents. Their income is below average. Consumers of this group have decided on their wishes, tastes and thinking. They buy medical services at their discretion. In order to make a decision, they must sort out everything and weigh all the arguments. They want to make sure that the costs are adequate to the service they receive. Quite often they are loyal to medical institutions. Most often, they receive the information from their relatives and friends.

Conformists – they buy a service in case it is necessary, mandatory and acceptable to all. They have no determined/definite views and values. The opinion of others and factors related to their environment are important to them. Income of

this group is average. They receive the information about services from their relatives and acquaintances.

Of the respondents, the most stable type of consumers is *Indifferent*. This group includes people who have not found their place in the changed economic environment and do not see the way to improve their personal situation. Their standard of living is low. Novelties of medical services are insignificant to them; the main thing to them is to get the necessary medical service. They do not seek health services; they are seeking the cheapest service. They take the decision to buy medical services only in urgent situations.

During the second stage, the *coefficient of <mark>purchase</mark>* and the *coefficient of the likelihood of additional purchase* are calculated for each type of the consumers. Based on the purpose of a purchase, each type of the consumers can be divided into 4 groups:

I.   Group: those who wanted to purchase services and purchased them. (q_1 specific share of respondents in each type).

II.   Group: those who wanted to purchase services but didn't purchase them due to certain circumstances/reasons (q_2 specific share of respondents of the second Group).

III.   Group: those who did not plan to purchase a service but accidentally purchased it (q_3 specific share of the third Group in each type)

IV. Group: those who did not plan to purchase a service and did not purchase it (q_4 specific share of the Group in each type).

Additionally, there is one more important condition:

$$\sum_{i-1}^{4} q_1 = 1$$

<mark>Specific share values of different groups of the respondents in each type.</mark>

Type	q_1	q_2	q_3	q_4
Innovators	0,86	0,10	0,44	
Successful	0,40	0,24	0,36	
Conformists	0,28	0,32	0,24	0,16
Determined	0,32	0,20	0,30	0,18
Indifferent	0,39	0,15	0,29	0,17

Sales Coefficient $\lambda_{\text{б}}$ is determined by the desires of I and II

$$\lambda_{\text{б}} = \frac{q1}{q1-q2} \quad 0 \leq \lambda_a \leq 1$$

provided that

$$\sum_{i-1}^{4} \lambda \Delta i$$

Type	Specific Share	λ_{Δ}	$\lambda_{\Delta 1}$	$\lambda_{\Delta 2}$
Innovators	0,007	0,89	0,10	0,03
Successful	0,11	0,63	0,24	0,29
Conformists	0,25	0,47	0,32	0,20
Determined	0,45	0,62	0,20	0,24
Indifferent	0,12	0,72	0,14	0,24

III stage – прогнозування на конкретну послугу потреб, taking into account the Sales Coefficient and the Coefficient of the Likelihoods

$$S_i = P_i[q_i(\lambda_{\text{б}}+\lambda_{\Delta 1})+\lambda_{\Delta 2}] \, N$$

where P_i– specific share of i type

q_i– specific share of a consumer who wants to purchase a service.

$\lambda_{\text{б}}$– Purchase Coefficient.

$\lambda_{\Delta 1}$ та $\lambda_{\Delta 2}$ – Coefficient of the Additional Likelihood of Purchase, which is the value of the specific share (який є показником питомої ваги) і $\Delta 1$ та $\Delta 2$ причини.

N – number of population in the segment for the year that is being forecasted.

In order to determine the number of population, it is important to remember that people aged 25-54 are active buyers, and, according to the population age structure of Ukraine in 2017, they comprise 44,29 % of the population. Our statistics indicated that 40,30 % are ready to use a medical service, of those: Innovators – 12,9 %, Successful – 49,90 %, Conformists - 45,00%, Determined – 40,40%, Indifferent – 36,90%.

In our opinion, these data will be useful to the medical institutions that must act on the market as well as to the state-owned medical institutions and organizations that offer medical programs.

Based on the marketing research we conducted, the following conclusions and suggestions can be made:

1. Despite the fact that there are many works devoted to the services sector's marketing, there is no consensus on services marketing. More and more scholars are lately becoming interested in the services marketing and devote many works to this topic, which in turn indicates the development of the services sector in their countries.

2. After analyzing many theories and practical data, a definition to the modern medical marketing was given; this definition points out that it is not only the creation of medical services and their delivery; a close contact of medical institutions with customers is vital to achieving this objective. Toward this end, an indirect channel and direct marketing methods should be used.

3. The use of marketing methods is important not only to those medical institutions that provide services; it also important to the healthcare management. Marketing methods are important tools to carry out the reforms; they are used in order to properly understand the scope of optimization and structure, taking into account the interests of an individual person and the society as a whole. Advocacy and educational work with both contractors and management of medical institutions is also essential.

4. In our work we proved that marketing activities should ensure the creation of a new medical service and promotion and sale of the currently

operating network. On one hand, it means the adjustment of diagnostic, medical and preventive institutions to the demand, and on the other hand – an active formation of demand.

5. Analyzing the processes, we concluded that the success of a company and the high quality of services significantly depend on the marketing activities they carry out. In the Ukrainian market environment, we often see just an individual PR, which can be called an ill-educated marketing method; however, with the use of proper methods, it can be transformed and used for the purposes of promoting the company.

6. It is shown in our dissertation that in countries with a rapidly developing economy, the growth of expenses per consumer is forecasted to decrease by one third. In other countries, where funds that have been allocated for health care are scarce, the healthcare economy is moving slowly.

7. Proceeding from our work, in order to make the health care system accessible to all, insurance shall be mandatory not only for the working population. It should cover all strata of the society, including those who are socially unprotected and/or unemployed.

8. The health care in Ukraine is currently being financed mainly by the state and, to a lesser degree, by the private sector. This is considered a negative trend against the backdrop of the high level of unemployment.

9. In the sphere of medical care, the focus should be on the strategic measures – such as the introduction of a new service, which responds to new challenges, and the improvement in the quality of service as the service itself is assessed based on the quality factor. These measures also include training and education of personnel, provision of material and educational methodological recommendations. However, this is not enough for efficient management. The state plays a very important role in regulating the medical market, which promotes healthy competition amongst medical institutions, and they, in turn, improve the quality of their services.

10. Our work is the characteristic of segmented consumer groups in the private medical market of Ukraine. This work gives the behavioral characteristics of each group of consumers. Based on the results obtained, we have identified the groups that have been consuming the paid medical services in the recent years.

11. The paid medical service is at the stage of formation. The respondents do not fully comprehend all positive aspects of paid medical services. In their opinion, paid clinics should exist, but the current prices should guarantee the high quality of service.

12. When choosing a medical organization, Ukrainian consumers often make decisions together with their family members, and they consider the recommendations of medical personnel to be important.

13. Ukrainian consumers are not sufficiently provided with information. The respondents' approach to various advertising methods, as well as the information received through the Internet, we consider incomplete and unreliable. On specific issues, our respondents rely on the trust in the clinic, and this is inversely proportional to the above.

14. The respondents who are satisfied paid medical services believe that medical institutions take responsibility for them and, consequently, provide the high quality service; however, they believe that services are overpriced at many clinics; for this reason, those people who need medical assistance, often do not go to the doctor.

15. Ukrainian consumers consider health care as one of the unattractive investment segments.

16. According to the research conducted, the quality of service, professionalism, reputation and popularity are the factors that are the most important to Ukrainian consumers when they choose a Ukrainian [medical] service. If the above listed factors are acceptable, then they pay attention to the cost and possible system of discounts, location of the clinic, payment mode and the availability of information.

17. Based on the consumers' behavior, it is mandatory to study and analyze their needs and motivations. Every healthcare specialist should be able to shape the consumers' needs and to predict their behavior.

18. Studying the consumers' behavior is important to companies operating in a competitive environment.

19. In order to potentiate and to ensure further support to the development of health care, the following steps should be taken:

• Constantly conduct marketing researches and develop marketing programs build on these researches;

• The development of innovative business projects should be based on marketing information;

• It is imperative to constantly work with potential and current clients;

• It is advisable to organize serious work with marketing partners operating in medical business;

• It is urgent to implement the experience of other countries in practice;

• It is necessary to consider the inflation factors when planning a pricing strategy;

• It is necessary to constantly strive for increasing the number of options for the state funding of medical services.

• It is necessary to introduce the practice of constant implementation of scientific innovations in the mechanisms of financing the health care system;

• Personnel should be selected considering the prospects of the market niche.

• It is advisable to constantly improve the system of accreditation of medical personnel;

• The development of special marketing programs is required in order to ensure a balance between responsibilities and capabilities of the state in the sphere of health care.