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**DISSERTATION ABSTRACT**

**Patient satisfaction as a prerequisite for improving the quality of medical care and administrative services in the hospital**

for the award of the educational and scientific degree "DOCTOR OF SCIENCE"

in the field of higher education 3. Social, economic and legal sciences, professional direction 3.7. Administration and management, specialty "Organization and management outside the sphere of material production (in healthcare)”

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**Varna 2022**

The dissertation contains 164 pages and is illustrated by 33 figures and 2 tables. The literary sources used were 132, of which 27 were in Cyrillic and 105 in Latin. In connection with the dissertation, 8 scientific articles and participations in scientific forums have been published and presented.

The dissertation was presented and approved by the Department of Economics and Helathcare Management at the Faculty of Public Health of the Medical University - Varna on 12.11.2020.

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The defense of the dissertation will take place on 04.02.2022 from 10:30 am online on the Webex platform.

The materials on the defense are available at the School for PhD studetns at the Medical University - Varna.

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24. **INTRODUCTION**

According to the ISO 9000: 2005 standard, the term satisfaction is defined as "Customer perception of the level to which his requirements are met". In turn, according to the same ISO 9000 standard, quality represents "the degree to which a set of inherent characteristics meets the requirements". According to Boneva, the term "requirement" can be understood as a need or expectation that is stated, usually implicit or mandatory.[[1]](#footnote-1)

Patient satisfaction is a central theme in this dissertation. The topic is of direct professional interest to the author, derived from his 11 years of work as a Marketing Manager and Administrative Director at Hospital and his desire to study the system of factors influencing patient experiences in the hospital and from there to develop and implement a model for innovation and improvement in the medical care and non-medical care in order to achieve higher levels of patient satisfaction. In addition, the practical observations of the author's work as part of the team of “Dr. Shterev” Hospital and his communication with different types of patients and hospital staff in different medical and administrative positions shows that successful hospitals in our days must offer comprehensive care to their patients on three levels. On the one hand, medical activity in accordance with the highest medical standards of good practice. Secondly, spatial arrangement, interior design and interior infrastructure, offering psychological and physical comfort. Thirdly, a wide range of additional facilities and services that are not directly related to medical care, but have an indirect positive impact on the patient's perceptions of quality care, attention and good care he receives.[[2]](#footnote-2)

With the expansion of the competition in the medical care market in Bulgaria and with the increasing self-awareness of the role of the patients in the decision-making process for diagnostic and therapeutic activities related to their health, the topic of satisfaction is becoming increasingly relevant. A review of the theoretical literature shows that patient satisfaction is not a completely clear concept, although there is no doubt that it is identified as an important indicator of quality that measures the success of a hospital.. It is certain that in the future the patient assessment of the provided medical care and administrative services will become an increasingly important prerequisite in order to enable the management of a medical institution to undertake improvements in the form of strategic planning and changes in hospital care and administrative service. All this is a prerequisite for the tasks set, the conclusions drawn, the conclusions made and the defined recommendations in this dissertation to be useful not only in terms of our theoretical understanding of patient satisfaction, but also for the practical work of the health managers in Bulgaria..

1. **PURPOSE AND TASKS**
2. Purpose:

The main goal of this dissertation is to perform diagnostic analysis and evaluation of the principles and characteristics of Bulgarian patient satisfaction and on their basis to develop comprehensive guidelines and measures to increase patient satisfaction with medical care and administrative services in hospitals.

1. Tasks:

The following tasks are set to achieve the goal set in the dissertation:

- First research task: Carrying out a scientific review of the specialized literature, examining the basic concepts, principles and factors influencing patient satisfaction and the related quality of medical care and non-medical care;

- Second research task: development of tools for a sociological survey among three groups and conducting own research in specific hospitals in Bulgaria to define the state of the problem in our country according to the understandings of patients, doctors and managers of the medical institutions;

- Third research task: on the basis of the conducted research, derivation of the factors influencing patient satisfaction and formulation of the guidelines for increasing the satisfaction of the patients with the hospital health services and the administrative service accompanying their treatment.;

- Fourth research task: Development of guidelines and measures to increase patient satisfaction with hospital health care as a factor in improving the quality of hospital health care and administrative services.

In the course of the dissertation the following theses were presented and proved:

- First thesis: Patient satisfaction and its research are important factors for improving the quality of medical care and administrative services in the hospital;

- Second thesis: In order to improve the quality, patients should be considered not only as those in need of medical care, but also as users of health care and non-medical services in the medical institution;

- Third thesis: The role of hospital management and the overall non-medical and administrative services accompanying treatment to increase patient satisfaction is growing as a leading factor in improving the quality and efficiency of hospital medical service in the new market conditions of health care.

1. **MATERIALS AND METHODS;**
2. **Operational concepts related to patient satisfaction:**

**Patient experience:** Patient experience is a key concept related to, but not equivalent to, patient satisfaction. According to Price, the patient's experience covers the different types of relationships that the patient has during his visit or stay in the hospital, including the care received from doctors, nurses, orderlies, and services from non-medical and administrative staff.[[3]](#footnote-3) As an integral component of the quality of medical care, the patient experience includes various aspects of the provided health services, which the patient appreciates when seeking and receiving medical care - timely admission at appointment, easy access to information, good communication with medical and administrative staff . Understanding patient's experiences is a key step towards achieving personalized medicine. By learning about patient experience, health managers can assess the extent to which an individual patient receives care that is tailored to and meets his or her individual preferences, needs, and values. Assessing patient experiences, among other components such as the effectiveness and safety of care provided, is a key point in creating an overall picture of the quality of care.[[4]](#footnote-4)

The terms "patient experience" and "patient satisfaction" are often used interchangeably, but as Rukiya points out, they are not the same thing. In order to assess the patient's experience, patients need to know whether something that should have happened during medical care (for example clear communication with the doctor) actually happened and how often it happened during the hospital stay.. Satisfaction, on the other hand, refers to whether the patient's expectations in receiving appropriate medical care have been met. For example, two patients who receive exactly the same health care, but who have different expectations of how medical care should be performed / provided to them, are more likely to give different assessments of their satisfaction.

**Personalized medicine:** The most popular definition of personalized medicine is "The right therapy at the right dose at the right time for the right patient.".[[5]](#footnote-5) Personalized medicine allows the development of an individual approach to medical treatment in accordance with the individual characteristics and needs of the patient. Thanks to recent discoveries in a wide range of scientific fields, including genetics and regenerative medicine, physicians are now able to treat their patients with greater accuracy and efficiency. Moreover, with the unraveling of the human genome, it is gradually possible to apply individualized pharmacotherapy for each individual patient. As a form of medical practice, the personalized approach aims to focus medical attention on the individual needs and concerns of the patient, rather than on the physician's understanding of the standard treatment of the disease. Patient satisfaction is an important part of personalized medicine, as the quality of health care according to her is not measured only on the basis of the medical outcome of treatment, but also on the patient's assessment of the care received.[[6]](#footnote-6)

In addition, due to the trend in recent years of the healthcare industry to focus on patient-centered care, patient satisfaction reflects on its involvement in the decision-making process and defines its role as a partner in improving the quality of healthcare and care. Patient satisfaction is a key marker of personalized medicine and good communication in the health sector, as well as the health-related behavior of patients in accordance with the prescriptions of their physicians..

**Patient satisfaction**: According to the ISO 9000: 2005 standard, the term satisfaction is defined as "Customer perception of the level to which his/her requirements are met". Here we can add that in addition to the requirements for satisfaction, the preliminary expectations and attitudes regarding the provided care, services or goods also have an important influence..

Despite its wide usability and recognition of its importance for improving the overall performance of a medical institution in the literature, there is still no single definition. Patient satisfaction is a term used by various definitions with a general focus by scientific authors. Below are some of the main definitions, which will support the use of the term in this dissertation..

In Donabedian's model of quality medical care, patient satisfaction is defined as the patient's subjective measurement of treatment outcomes, while medical structures and processes can be measured through patient-reported impressions..[[7]](#footnote-7) Many authors have different perceptions of the definition of patient satisfaction. Jenkinson and team point out that patient satisfaction is primarily a manifestation of attitudes toward health care or aspects of that care.[[8]](#footnote-8) In turn, patient satisfaction can be defined as the patient's emotions, feelings, and perceptions of the care provided. On the other hand, satisfaction can be defined as the degree of agreement and coverage between the patient's expectations of ideal care and their perceptions of the real care they receive.[[9]](#footnote-9) According to another definition, patient satisfaction is generally accepted as a desirable qualitative characteristic and there are standardized techniques by which it can be measured. These standardized techniques are an anonymous survey, direct or indirect interview, filling in a questionnaire with assessments of various aspects of the patient's experience in the medical institution.

In an increasingly competitive healthcare market, health managers need to focus on achieving high or excellent patient satisfaction scores that reflect the high quality of healthcare offered. For this reason, they must characterize the factors influencing patient satisfaction that are used as a means of assessing the quality of medical care. To understand the various invoices that affect satisfaction, researchers have studied various dimensions of the sense of quality. Satisfaction measurement “must incorporate dimensions of the technical, interpersonal, social and moral aspects of health care.“[[10]](#footnote-10)

Eventually, patient satisfaction is not a clear concept, although there is no doubt that it is identified as an important indicator of quality that measures the success of a hospital. However, many authors agree that patient assessment of the care provided is an important prerequisite for enabling the management of a healthcare facility to make improvements in the form of strategic planning and changes that sometimes exceed patients' expectations..

**Measurement / survey of patient satisfaction:** The measurement and evaluation of patient satisfaction is a key element in the analysis of the performance and the achieved results of a medical institution. It is for this reason that this concept is one of the central tools considered in this dissertation.

The health sector in Europe, the United States and Asia has been subject to continuous quality improvement, and since the mid-1990s this trend has been largely due to the incorporation of patient perceptions of treatment into the measurement of overall quality of care. As a result of these processes, health managers are increasingly applying a patient-centered approach as a key component in the health mission of the hospitals they run..

In the last 20 years, patient satisfaction surveys have become increasingly important as meaningful and very important sources of information for identifying problems and building effective action plans aimed at improving quality in healthcare organizations. Healthcare managers who strive for excellence in their hospitals are increasingly taking into account patients' opinions and perceptions when developing strategies to improve the quality of healthcare. Health authorities and regulators in Europe and the United States are moving even further, shifting to a market-oriented approach that turns patient satisfaction surveys into a quality improvement tool for the overall performance of the facility.

**Continuity of medical care:** A concept that in the specialized literature is directly related to the impressions and general satisfaction of patients is the so-called continuity of medical care. Continuity of health care is accepted as a basic principle of quality health care.

Three dimensions of the continuity of medical care are organized in a hierarchical order:

- availability of accurate information from one medical examination / hospital stay to another (information continuity);

- Model of health utilization and coordination in one medical institution (horizontal continuity);

- Personal doctor-patient relationship, characterized by loyalty and trust (interpersonal continuity).[[11]](#footnote-11)

**Attitudes - patients, doctors and management of the medical institution:** The preconceived notions with which patients on the one hand and the medical staff and the administration of the medical institution on the other come into contact with each other is another important concept related to patient satisfaction. Attitudes are the "pre-set expectations" of the participants in the medical or administrative process in the hospital regarding their upcoming experiences related to the medical care and non-medical care they will receive. Preconceived notions often have a key impact on patients' subsequent satisfaction or dissatisfaction, insofar as they determine expectations, behavior, acceptance, and evaluation of treatment and general care received. In other words, patients receiving similar care may have different levels of satisfaction based on their preconceived notions. The attitudes of patients, doctors and the management of a medical institution differ, which naturally leads to a different assessment of the same actions by different participants in the medical and administrative hospital process. The preliminary attitudes of the patients are influenced by various factors such as the authority of the doctors, the image and communication policy of the medical institution, the recommendations of relatives and acquaintances, the public mood of the medical community, the cultural environment, etc.

**Communication channels:** Communication channels are an important concept related to patient satisfaction. In practice, the ways in which hospital staff, whether at the medical, administrative or maintenance level, communicate with patients have a direct impact on their experiences and attitudes towards medical care and non-medical care, and hence their ultimate satisfaction. Communication channels are all types of means and media through which the team of a hospital transmits information to its patients and receives feedback from them. Through them, the medical institution not only informs its patients on topics related to medical and administrative aspects of their treatment, but also transmits messages and news from the inner life, development and achievements of the hospital. Extensive communication through various channels and information media is playing an increasingly important role in modern medical centres in their mission to maintain a high level of satisfaction of their trusted patients..

Communication channels include three types of channels - direct, indirect and mediated. Direct channels are those through which the staff of the medical institution communicates directly with patients such as: the registry, front office (information), call center or contact center, administrative service units for documentary issues, crisis teams to take on problematic and dissatisfied patients and of course direct communication between doctors, medical staff, administrative staff and patients. Indirect channels are the information system of the hospital, the website, the profiles of the medical institution in the various social networks, the digital systems for recording hours, newsletters, various hospital publications such as magazines, brochures, leaflets. Media channels are the various ad hoc or long-term partnerships that the medical institution builds with the Internet, print or electronic media to cover medical achievements, administrative innovations, promotion of activities or educational functions on certain socially important health topics. The combined use of the three types of communication channels determines the communication strategy and policy of the hospital, which has a direct impact on its image, fame and positive perception by society and its patients.

**Hospital infrastructure:** Hospital infrastructure, interior design and comfortable conditions play an important role in addressing the issue of patient satisfaction. Almost every satisfaction survey includes a survey on the interior environment in the hospital.

Hospitals are one of the most complex institutions in terms of building infrastructure. Each hospital covers a variety of functional and service units. They are performed in them. The following is performed:

- Diagnostic and therapeutic functions, such as laboratory activities, imaging activities, operating rooms, intensive care units, etc .;

- Functions of hospital stay of patients related to bed rest and recovery after certain medical procedures;

- Functions for providing comfortable conditions, such as hospital nutrition and maintaining cleanliness and hygiene, etc.

This diversity affects the scope and specificity of the regulations, rules, requirements and controls for creating and maintaining a good hospital infrastructure. Each of the wide-ranging and constantly evolving functions of a medical institution includes extremely complex material, mechanical, electrical and telecommunication systems, so that the activities in it can be carried out without any problems. The different functional units in a hospital may have competing needs and priorities. The role of good hospital infrastructure and its maintenance is to integrate the various functional requirements with the human and professional needs of its diverse users.

1. **Methods, object and subject:**

In the dissertation the following are used:

- Literary review of specialized literature;

- Sociological method - survey method - conducting own research based on three types of surveys for the three separate groups with closed questions with a choice of options and closed questions with liqueur-type scale.

- Graphic analysis - to illustrate the studied information.

Materials: Scientific literature, research in the field of health management and measurement of patient satisfaction.

Object and subject:

* The object of the dissertation is patient satisfaction with the received medical care and administrative services in the medical institution for hospital care.;
* The subject of the dissertation are the factors and attitudes influencing patient satisfaction and the quality of medical care and administrative services in medical institutions for hospital care.;
* The subject of the research are three groups of respondents involved in the process of providing hospital medical care, which are related to the assessment of the quality of medical activities and administrative services and hence to patient satisfaction: patients, health managers and doctors.

1. **Design:**

* The survey covers 462 respondents. The surveys are aimed at three groups of respondents to analyze the specifics of determining the above topics from the perspective of the various participants in the organization and conduct of the treatment process. This approach makes it possible to determine the characteristics and nuances in the understanding of patient satisfaction and related factors by patients, health managers and physicians.
* The research is based on conducting three types of surveys for the three separate groups with closed questions with a choice of options and closed questions with liqueur-type scale. The content of the three questionnaires was prepared after an expert discussion in the team of specialists of the Marketing and IT departments of Medical Centre "Dr. Shterev", testing the questionnaires among internal focus group and accepting proposals and making adjustments to the questionnaires after the focus group assessment.
* The Patient Survey contains nine sections with a total of 39 closed questions and one open question for comments. The survey was conducted within the period June 01 until June 30 2017 at “Dr. Shterev” Hospital and covers 301 surveyed patients of the hospital. A private medical institution was chosen to conduct the survey due to the fact that the patients visiting it have a higher educational status, use various communication channels, are ready to freely express their opinion and assessment of their patient experiences and have clearly recognized quality requirements, the medical care, for the level of medical and administrative services and for comfortable conditions of the hospital infrastructure and internal environment. The surveyed patients were selected randomly from the general population of all those who visited the hospital in the respective period. Each patient had an equal chance of being included in the sample of respondents. The sections of questions in the survey are grouped into several groups:

1Demographic information and reasons for visiting the medical institution; 2. Information about the choice of the medical institution and the used communication channels; 3. Information about the appointment and reception in the medical institution; 4 - 7 Information about the received care and service in the medical institution from different medical and administrative units; 8. Information on the financing of the medical care for the respective patient; 9. Open question for comments and recommendations.

* The survey for health managers contains three sections with a total of 12 closed questions and 1 open question for additional comments. The survey was conducted in the period May 1 - August 25, 2017. The questionnaires were sent to members of several associations of hospitals in Bulgaria – The Bulgarian Hospital Association, The National Association of Private Hospitals, The Bulgarian Association of University Hospitals and The Association of Municipal hospitals in Bulgaria. The survey is aimed at experts - practitioners in the field of health management, which determines the smaller number of participants in the survey. 61 specialists from 29 private, state and municipal hospitals took part in the survey. The scope of the research and the obtained results give an adequate picture of the understandings of health managers in Bulgaria about the principles and factors of patient satisfaction and the priorities that the medical institutions managed by them must develop in order to maintain its high level. The sections of questions in the survey are grouped into several groups: 1. Information about the health manager and the medical institution he/she represents; 2. Assessment of the factors influencing the patient's satisfaction; 3. Open question for comments.
* The survey for doctors contains three sections with 13 closed questions and one open question for additional comments. The majority of the questions in the medical survey are identical to those in the management. The aim is to capture the difference in the perceptions of the two types of participants in the organization and conduct of the treatment process on the main topics related to patient satisfaction. The survey was conducted in the period June 1, 2017 - February 14, 2018. The questionnaires were sent to the management of hospitals members of the above organizations with a request to be submitted for completion to their medical staff. 100 doctors from 15 private, state and municipal hospitals took part in the survey. The obtained results make it possible to compare the data in the perceptions of doctors compared to those of health managers and patients on the main factors of patient satisfaction.

Limitations of the research method used

The survey is a method by which one can easily identify the main areas in which improvements can be made or in-depth research is needed to obtain more specific results and conclusions if necessary. In the present study, the analysis of the results of the three types of surveys provides a good basis to summarize the main parameters in the understandings of the three surveyed groups - patients, health managers and physicians on topics related to communication channels, ways of choosing a hospital and priority factors on patient satisfaction. On this basis, a package of measures and recommendations can be derived to increase the satisfaction of the Bulgarian patient with hospital care. In addition to this advantage, the survey method contains several limitations. One of them is that as a quantitative method the survey sometimes does not allow to go into details and cover the nuances in the ranking of the leading factors influencing patient experiences and satisfaction according to the three types of respondents. Another limitation of the method is that it mainly reflects the perceptions of the respondents in relation to a given problem and thus there is a certain amount of subjectivity. An additional limiting condition of the specific study through a survey of patients is that it was conducted only among patients of a private specialized medical institution - Medical Centre "Dr. Shterev". The reasons for choosing this approach are mentioned above. The surveys for doctors and health managers sought a balance by recruiting among these two groups of respondents from different medical institutions with private, state and municipal property. The last limitation of the survey is the limited time period of its implementation, and the researcher's aim was to be long enough to be able to derive the main characteristics in the understandings of the three types of respondents about the factors and principles of patient satisfaction.

1. **RESULTS AND DISCUSSION:**
2. **Analysis of the results of a survey: Principles and characteristics of Bulgarian patient satisfaction:**

The survey refers to a series of four questions related to various factors that patients should assess in order of importance in terms of their impact on their satisfaction with contact, treatment and stay in the hospital. The four factors are:

- Quality of medical care;

- Polite staff service;

- Good non-medical and administrative services;

- Comfortable environment and cozy atmosphere.

Each factor was evaluated separately and patients were not required to rank the individual factor in order of importance over the others. Therefore, given the common understanding that all four factors have a significant impact on the overall sense of satisfaction and are expected to be assessed only with high marks, in order to assess the severity of each factor over others in the analysis, we will assess the nuances in the answers.

Fig. 1 Quality as a factor with patient satisfaction.

The first question is related to the extent to which the quality of medical care affects the satisfaction of the interviewed patients. (Fig. 1) Here the answers are categorical, as 94% state that quality is extremely important for their satisfaction, 4% say that it is important and only 1% think that it is not so important. It is interesting to note that this definite assessment comes against the background of data from a number of specialized studies that patients can not adequately assess the quality of medical care received because they do not need medical competence and their assessment of this quality is a product of other subjective factors that are sometimes not directly related to the actual medical outcome.[[12]](#footnote-12)

Fig. 2 Polite service as a factor in patient satisfaction.

The distribution of answers is different in terms of polite staff service (Fig. 2). 59% define it as extremely important (unlike the categorical 94% when it comes to the quality of medical care), and 37% as important. These results show that although patients accept the courtesy of staff as a serious factor in their overall satisfaction, they still pay more attention to the quality of medical services. All of this, however, is more about the patient's perception of how he or she thinks he or she should prioritize polite care in order of satisfaction, rather than how it actually affects. Medical practice abounds in cases where the good treatment of the patient manages to balance the not-so-good medical care and he eventually leaves the hospital satisfied. This is again due to the fact that patients do not have the competence to actually assess the quality of medical service, but on the other hand they can very clearly understand when they are treated politely and carefully and when not. However, when asked directly what is more important to them, patients prioritize quality over courteous care

.

Fig. 3 Fine non-medical / administrative services as a factor in patient satisfaction.

The third satisfaction question, related to the evaluation of good non-medical / administrative services, again shows specificity when assessed in terms of the nuance in the distribution of the “extremely important” and “important” answers (Fig. 3). Here, only 37% of respondents answered that good administrative services accompanying treatment are extremely important in determining the level of their satisfaction. 49% say they are important, and as many as 7% say they are not so important. The percentage of those who did not answer this question is also high - 7%, which shows that they either do not understand it or consider it insignificant

.

Fig. 4 Comfortable environment as a factor for patient satisfaction.

The picture is similar when it comes to the comfortable interior environment and the cozy atmosphere (Fig. 4). 36% answered that it is an extremely important factor for satisfaction. 50% state that it is an important factor. 6% that it is not so important and 8% leave the question unanswered.

In summary, if we consider the answers to four questions together, we can conclude that in a direct answer patients rank the quality of medical care as the most important factor influencing their satisfaction. In second place is the polite service of medical and non-medical staff. Third, with an almost equal impact, patients rank the good non-medical services that accompany treatment and the comfortable interior environment..

**2. Analysis of the results of a survey: Bulgarian health managers on the factors influencing patient satisfaction**

*The opinion of health managers about the leading factors in attracting patients:*

The analysis of the patient surveys showed that according to them the leading factors that attract them to a particular medical institution are good specialists, good service and good equipment. In turn, the opinion of health managers on the same topic largely coincides with the patients mood (Fig. 5). 25% of the respondents state that among the leading factors for patient satisfaction are the good specialists. This shows that in Bulgaria it is still accepted that the fame of individual doctors is what attracts patients, not the overall image of the hospital. 21% say that what attracts patients is good service and attitude towards the patient. In other words, many of the surveyed health managers believe that even if they do not have other advantages, polite and friendly treatment of patients would be enough to make their hospital preferred. The most interesting thing here is that this factor is ahead of the medical results indicated by 19% of the respondents. In other words, the majority of health managers believe that good care takes precedence over medical outcomes in terms of attracting and retaining patients. This result is consistent with the results of studies in Europe and the United States that patients can not adequately assess the quality of medical care received, but base their opinion on their satisfaction with the personal and courteous attitude they received during their treatment and hospital stay. 17% of the respondents indicate that the good image of the medical institution is a leading factor in the choice of patients on the spot for their treatment. This shows the growing need to focus efforts and costs on public promotion of the activities and successes of medical institutions in order to attract new patients. Moreover, this result, compared to only 2%, indicated that the popularity of a hospital may be a factor in attracting patients, shows that Bulgarian health managers are already well aware that to be preferred to a medical institution, it is not enough simply to be known to the public, but to enjoy a good name and to be associated with positive achievements. Good non-medical and administrative services are mentioned by only 1% of the respondents, which shows that in our country the idea is not yet accepted that non-medical care accompanying the treatment is a decisive factor in shaping the preferences of patients. Interestingly, surprisingly only 2% indicate that a good building and interior environment are important for the attractiveness of a hospital. Managers from private hospitals obviously take this factor for granted, because this option was chosen mainly by representatives of municipal hospitals, who clearly accept that significantly worse conditions in their hospitals are the reason for the outflow of patients.

Fig. 5. Leading factors according to health managers in the choice of medical institution by patients.

*The opinion of health managers about the weight of the individual factors for patient satisfaction:*

When health managers are asked to prioritize the various factors that affect patient satisfaction, the nuances of their understanding of what is more relevant to creating a favorable patient experience and hence positive attitudes toward care and treatment, are evident (Fig. 6). The studies cited in the dissertation show that along with the medical results, the good attitude of doctors, nurses and administrative staff are ranked as an equal factor in achieving high levels of patient satisfaction. In addition, another factor is important, which is related to the relations between medical specialists among them, which is often neglected in Bulgarian medical institutions. A priori accepted as an important factor related to the cost of medical care, in-depth analysis may be less important if other conditions are met, related to good treatment, good medical results and quality interior environment.

All the above assumptions are confirmed by the results of a study conducted among health managers. The highest rated factor as the strongest influencing patient satisfaction is the quality of medical care received. It is listed as the one with the strongest influence of 17% of the surveyed managers. After that, 16% state that the most strong influence is the polite attitude of doctors towards patients. It is not surprising that immediately after it, the polite attitude of the midwifery staff - midwives or nurses, towards the patients is ranked by 15%. According to some American studies, it turns out that doctors are not the ones who spend the most time and have the longest contact with patients during a hospital stay.[[13]](#footnote-13) Far longer interaction and more serious impressions patients receive from the paramedics. Ultimately, the attitude of nurses can be decisive for the quality of the patient's stay in the hospital and for the formation of his ultimate sense of satisfaction. This is also assessed by the Bulgarian health managers, who rank the factor “polite attitude of nurses ”are among the three most influential factors in the patient's positive attitude. In the fourth and fifth place with equal relative weight 11% of respondents put the hospital infrastructure and administrative services. The influence of a good interior environment has long been accepted, but more interesting here is that it is already highly valued and a factor that until recently was neglected as an influence on satisfaction. It is a question of adequate administrative service. Admission to a hospital has long been not only related to medical activities, but is accompanied by many additional purely administrative processes, such as hospitalization, issuance of sick leaves, issuance of documents for reimbursement of additional health insurance, good service and referral , preparation of complete documentation, etc. Patients are increasingly appreciating this administrative work that accompanies their treatment and this is now understood by health managers, especially in private hospitals. In the sixth place, mentioned by 10%, as an important factor patient satisfaction is the image and fame of the medical institution. Apparently, health managers accept that patients are more likely to be satisfied with the care they receive in well-known and well-accepted hospitals. Interestingly, the cost of medical care is placed by managers in the penultimate place as a factor influencing satisfaction. Here it is important to note that this factor is mentioned as the most important by the representatives of state and municipal hospitals. This is normal given the fact that more insolvent and more financially sensitive patients are most often treated there. However, putting the "price" factor in such a low place is most likely the result of the growing trend in recent years in Bulgaria of the group of Bulgarian citizens who turn to high-quality medical care and are willing to pay the price to guarantee them. In other words, when they receive high-level diagnosis and treatment, the cost of these medical care is not so much a determinant of overall satisfaction. Lastly, as an influence, indicated by only 5%, is the attitude of employees among them. This neglect of the internal collegial environment can rather be defined as incorrect in the light of the studies cited in the dissertation, which show that poor team relations have a negative impact on patients' feelings.[[14]](#footnote-14) More interestingly, however, for some reason there is a contradiction in the opinion of the managers of this result with the answer to the next question, which asks them what they would improve in their hospital. In the third place is the need to improve the team relations among the staff. However, health managers are aware that medicine is a team activity and these relationships are very important for the overall business. However, they clearly believe that bad inter-team relations only affect the internal aspects of working in a medical institution and are not noticed by patients and from there do not greatly affect their satisfaction. Again, we think this is a misconception and patients can feel quite well when there is tension and opposition among medical professionals in a hospital.

Fig. 6. Leading factors according to health managers influencing patient satisfaction.

Related to the above ranking is the additional question in the surveys for health managers - if they could significantly improve only one parameter in their hospital what would it be (Fig. 7). The largest percentage of responses is received by the factor - patient care. This parameter is preferred by 32% of respondents. It is followed by the improvement of medical results with 29%. This shows that health managers in our country, as well as their colleagues in Europe and America, are aware that good treatment alone would not bring them such positives in terms of patient satisfaction, if not combined with polite and careful attitude towards patients. Both in Bulgaria and worldwide, there are countless examples of medical institutions with impeccable medical results and brilliant specialists, who, however, do not enjoy good evaluation from their patients, precisely because of poor communication and rude attitude of medical and non-medical staff to them. Interestingly, 16% of respondents indicated that they would improve team relations in their hospital. There may be two reasons for this answer. One is that medicine is a team activity and good results, good service, and hence satisfied patients, are possible only when this team is at a good level. The second is that, according to some studies, poor relationships among specialists and poor coordination among teams in the hospital are always noticed by patients, make them feel uncomfortable and restless, and reduce confidence in the care they expect to receive.[[15]](#footnote-15) 10% of respondents indicated that they would improve the communication skills of medical staff. The assessment here is that a good modern doctor needs not only medical training, but also the ability to communicate with his/her patients so that they can be satisfied with the treatment and care received from him. Another 10% of respondents said that if they could choose only one thing they could improve in their hospital, it would be the internal environment and hospital infrastructure. Here again, this answer is given only by representatives of municipal hospitals. Only 3% say they would improve the image and popularity of their hospital. This low percentage is probably due to the fact that the surveyed health managers accept that if they improve on priority factors for them, it will inevitably have a positive impact on the overall image of the hospital they manage.

Fig. 7 The opinion of health managers which parameter in the medical institution managed by them would be improved as a priority.

**3. Analysis of the results of a survey: Bulgarian doctors on the factors influencing patient satisfaction**

*The opinion of doctors about the leading factors leading patients to choose a medical institution:*

The analysis of the patient surveys showed that according to them the leading factors attracting them to a particular medical institution are good specialists, good service and good equipment (Fig. 8). In turn, on the same topic, the survey of health managers showed that their opinion largely coincides with the mood of patients. In the survey of doctors again in the first place as a factor attracting patients are good professionals. This coincidence, on the one hand, confirms the common opinion that patients are referred to a medical institution mainly because of the doctors who work in it. On the other hand, it is a demonstration of the high self-esteem that specialists place and the clear awareness that the number of trusted patients and the general authority of the medical institution where they work depends on their actions, skills and image. In second place is good service and attitude towards patients. This result shows that the process of realization by Bulgarian medical specialists that the attentive attitude and good communication with patients is key in achieving high levels of their satisfaction. This understanding can only bring positives in the quality of patient experiences in Bulgarian hospitals in the future and to overcome some of the deficits in patient-physician relations in our country. However, it is interesting that as the third and fourth factor that attracts patients, doctors do not put the good equipment, without which their work is impossible, but point to the good image and fame of the hospital. In reality, this is a very objective and adequate assessment, given the examples in Bulgaria of a number of new hospitals equipped with modern equipment, which, however, do not yet have a name in society and in the initial period of its initiation fail to attract a significant number of patients to others who enjoy authority and a good image and a greater patient flow without the most modern equipment. Good equipment and good medical results are surprisingly cited by doctors as only the fifth and sixth most influential factors included in the survey. This can be due to several reasons. In the first place, the survey included representatives of mostly private hospitals, which probably take modern equipment as a necessity, necessary for their daily work, but not so clearly understood by patients, who determine their preferences based on other factors, as recommended by relatives and good opinions about the respective medical institution on the Internet. Secondly, the lower assessment of medical outcomes as an attractive factor is probably due to the correct understanding after doctors that patients do not have the competence to evaluate these medical outcomes unless they are "translated" in the form of recommendations or comprehensible advertising publications. The quality of the administrative service and the good building and interior environment are placed by the surveyed doctors as the least influencing factors in the choice of patients.

Fig. 8 The leading factors according to doctors in the choice of medical institution by patients.

*The opinion of doctors about the leading factors in choosing a doctor:*

Although patients most often state that the professional qualification of their doctor is most important to them, the practice shows that leading to their satisfaction is the personal attitude and communication skills of the specialist they trust. This is obviously understood by Bulgarian doctors, because in the survey the majority of respondents indicate that good attitude towards patients is a leading factor in choosing a doctor (Fig. 9). The second most influential factor is the fame and good image of the doctor. Apparently, the respondents believe that patients' preferences are determined mainly on the basis of subjective criteria, and as far as they are not competent to assess either the professional qualification or the medical results of the specialist, they rely mainly on his "good name". Respondents' assessment of "good name" is not limited to the public image of the doctor among patients, but also to the fame of the guild specialist. In other words, the extent to which colleagues from other specialties are willing to recommend it to their patients on issues related to his medical field. The accumulated experience, along with the medical results, is indicated by the participants in the survey as the last influencing factor among those included in the study. This is probably due to the assessment of specialists that the experience is needed by the doctor for his/her "personal consumption" – for example, in dealing with medical cases, but not so important in the choice of the patient.

Fig. 9 Leading factors according to doctors in the patents’ choice of physician.

*The opinion of doctors about the importance of individual factors for patient satisfaction:*

As in the survey of health managers in the assessment of physicians for the importance of the individual factors that affect patient satisfaction, the nuances in their understandings are captured. Although physicians do not value medical outcomes as a factor in attracting patients to a medical institution or physician, as health professionals they place the quality of medical care as a leading factor in determining patient satisfaction (Fig. 10). Secondly, they determine the polite and careful attitude of doctors. The combined result of these two factors, cited by a total of 29% of respondents, shows that physicians accept themselves and their actions and behavior as being most responsible for patient satisfaction levels. Respectively, 12% and 11%, say that polite and considerate treatment of nurses / midwives and administrative staff, respectively, is important. This is a demonstration of the recognition by doctors of the role of these units in the overall care of patients of the respective medical institutions. More interestingly, 12% of respondents cite the fame and good image of the hospital as an important factor in patient satisfaction. Apparently, doctors accept that patients who visit well-known medical institutions are more likely to form an assessment of their patient experiences based on the image of a good medical institution and are willing to ignore slight deviations between their expectations and the actual medical care and service. The ratio between the staff of the hospital is also indicated by 11%. This is probably due to the correct understanding of doctors that medicine is a team effort and patients value their experiences in the hospital as a combination of their contacts and relationships with the teams of different units, be they medical and non-medical. According to the surveyed doctors, the cost of medical care and administrative care was assessed with the lowest weight. As with health managers and Bulgarian doctors, the prevailing understanding is that in the presence of other factors such as good specialists, good service and good environment, price is not leading in the formation of attitudes and patients satisfaction. In turn, the neglect of the administrative part of the functioning of a medical institution is typical for doctors not only in Bulgaria but probably worldwide, so the assessment in the present study is not surprising. However, it should be borne in mind that in our time the overall satisfaction of patients is formed as a complex of medical care received and administrative services provided in the hospital. Neither one nor the other factor can compensate on its own when one of the two is at a poor level.

Fig. 10 Ranking of the leading factors by physicians influencing patient satisfaction.

1. **Summary analysis of the results.**

In summary of the results of the three types of surveys among patients, doctors and health managers we can display the following table, which combines the three groups of key factors for patient satisfaction and ranks the six leading ones:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Degree of importance** | **Factor** | **Indicated by patients of:** | **Indicated by doctors of:** | **Indicated by managers of:** |
| 1 | Quality of the medical care | 1 | 1 | 1 |
| 2 | Polite and careful attitude of medical staff | 2 | 2 | 2 |
| 3 | Hospital infrastructure (interior) and equipment | 3 | 5 | 3 |
| 4 | Fine administrative service | 2 | 5 | 3 |
| 5 | Fame and good image of the hospital | 4 | 4 | 4 |
| 6 | Staff / team relationship | - | 5 | 6 |

Table. 1 Ranking of the main factors influencing patient satisfaction, according to the patient, health managers and doctors.

Note. Some of the factors were mentioned by the different groups of respondents as equal in importance.

The main conclusion that can be drawn from the results of the study is that patient satisfaction is influenced by a complex of factors. Leading among are the quality of medical care, polite and attentive attitude of medical and administrative staff and hospital infrastructure, interior environment and provision of equipment. The good balance between these factors allows a medical institution to take care of and serve its patients well and to achieve high levels of their satisfaction..

V. CONCLUSIONS AND RECOMMENDATIONS:

1. **Main conclusions:**

Based on the theoretical review of the scientific literature performed in the dissertation and based on the results of the surveys among patients, doctors and health managers, the following main conclusions can be drawn:

- The satisfaction of patients in their contact with a medical institution for diagnosis, therapy, hospital stay and rehabilitation depends on a complex of factors, among which the received medical care is the main, but not the only factor.

- The good impressions and positive evaluation of the hospital patients are based on their perceptions of a combination of criteria, including:

* The medical organization and the received medical care;
* Administrative and non-medical services;
* The external communication and the relations of the team of the medical establishments with the patients;
* The motivation of the medical and administrative staff;
* Medical infrastructure and interior environment.

- The management of the medical institution has a key role in developing a strategy and taking measures to improve the five described areas..

- With regard to the medical organization and the health care provided, the management of the hospital can direct efforts to develop the communication skills of the medical staff, to encourage the medical teams to demonstrate personal attitude to patients within acceptable limits, to resolve internal conflicts between specialists, units and departments, for the development of a program for continuing qualification of medical staff, for the implementation of an investment program for the purchase of modern equipment and apparatus, for the development of research and development and implementation of new methods in clinical practice.

- With regard to administrative and non-medical services, the management of the medical institution can offer improvements in connection with the internal movement of patients and the organization of their admission, hospital stay and discharge, financial services to patients, the information services from the registry, contact center and front office at the hospital.

- In connection with external communication and patient relations, the hospital management can rely on measures to develop the communication channels of the medical institution, to improve the hospital's presence in social networks and online media, to implement various information campaigns..

- In terms of improving the motivation of hospital staff, management can focus on building a well-functioning human resources team, developing an internal communication system to share positive news, team and hospital success, disseminating strategic decisions and plans, undertaking measures for team building and motivational measures, development of an incentive system for payment of different types of specialists and employees, implementation of a scheme for employee participation in the process of giving ideas for development and decision-making.

- In relation to the interior environment and medical infrastructure, the hospital management can make improvements to help increase the sense of comfort and coziness for patients during their visit and stay in the hospital and to create professional facilities for medical and administrative staff in their daily work.

Based on the listed conclusions, the dissertation presents specific recommendations and measures in all described directions, through which the management of a hospital can positively influence patient assessments and satisfaction and hence improve the overall quality of medical care and administrative services. It is important to mention that a significant part of the recommendations and measures proposed in this dissertation have been introduced in practice at the “Dr. Shterev” Hospital have been tested and have led to a positive result in improving administrative services and organization of medical care for patients of the medical institution in order to increase their overall level of satisfaction.

1. **Recommendations and measures for improving the medical organization and health care in the medical institution:**

The results of our own research among patients show that the quality of medical care is the most important factor for their satisfaction and good specialists and good equipment are among the three main factors in choosing a hospital. Here we will not dwell in detail on recommendations to improve the overall medical organization and quality of health care in the hospital, because this is an extremely complex and broad problem and requires a specific view of the work in each individual institution. We will consider several measures in the direction of providing the hospital with equipment and apparatus, ensuring the continuing qualification of medical staff, the introduction of new methodologies and the development of scientific and educational activities, improving communication skills of medical professionals and promoting personalized approach to patients.

The presence of modern and high-tech equipment in a hospital marks the limits of the diagnostic and therapeutic capabilities of its specialists. Every modern medical institution must have an investment plan in place to purchase new and upgrade existing medical equipment. Experts advise the hospital to set aside between 5% and 10% of its annual turnover, so that this goal, which would allow it to keep pace with trends in medical practice, would allow it to implement new methodologies and ensure its competitiveness.

In our time there are more than 10,000 thousand different types of medical equipment and apparatus. The choice of the right equipment depends mainly on the profile of the hospital and the specific requirements that must be met by national medical standards in the specific specialties in which the hospital has departments or sectors. In addition to these factors, the availability of trained specialists to work with it, as well as their preferences for brands and characteristics of the respective equipment, have an important influence on the choice of equipment. In addition, an important factor is the frequency of diseases and medical problems that will be diagnosed and / or treated with relevant medical technologies.

In any case, the diversity of the medical equipment market is so great, and the needs of individual hospitals and their units are so different that it is impossible to make a comprehensive list of basic equipment needed for a hospital to function. One of the most detailed lists has been prepared by the World Health Organization and the ECRI Institute[[16]](#footnote-16). It describes "core medical equipment" - these are technologies that are considered important or necessary for specific preventive, diagnostic, therapeutic or rehabilitation procedures performed in most medical institutions. The list describes in detail the type of medical equipment concerned, the health problems treated, the operating procedures, the average size, weight and price range, as well as the infrastructural requirements for the efficient and safe use of the equipment. The technologies are published in the list on the basis of a nomenclature system and are not tied to a specific brand, model or manufacturer. This list gives a good basic idea of ​​the equipment that a hospital needs to acquire in order to be able to offer health care in certain specialties..

In practice and in summary, the leading factors influencing the choice of equipment are the equipment of a medical institution:

* The list of diagnostic, treatment and rehabilitation medical activities and procedures that will be performed in its hospital wards and outpatient units;
* The requirements of the medical standards in the respective specialties, which will be developed in the medical institution;
* The requirements of the medical specialists who will work in the respective hospital wards and outpatient offices;
* The price possibilities for purchasing new or used medical equipment of the respective hospital;
* The price offered by individual companies-importers of medical equipment.

Extreme attention should be paid to negotiations with potential equipment suppliers. It should be borne in mind that significant price discounts can be obtained when purchasing different types of equipment for the needs of different wards and outpatient sectors from the same manufacturer. In addition, the possibilities for deferred payment of the equipment should be studied, so that the financial burden will be distributed over time and the hospital will pay for the available equipment, having practically started the medical activity with it and started payments for the procedures, manipulations and operations. For certain types of medical equipment, the use of which requires the use of certain medical supplies, some suppliers provide the opportunity to deliver and install the equipment free of charge against a contract for the purchase of a certain amount of consumables for a certain period. Attention should also be paid to the use of equipment for rent, which is appropriate when it comes to performing interventions that are applied less frequently in the respective medical institution.

The next important task for the management of a hospital is to ensure the continuing training of its medical teams. Every medical institution that wants to develop and offer high-quality health care to its patients needs to invest in the continuing qualification of the medical specialists working in it. This is done by encouraging and financing the participation of specialists in the first place in training courses and practical training to acquire new competencies, learn new methods and work with new equipment. Secondly in the development and financing of a program for participation in scientific conferences, congresses and symposia for the presentation of their own achievements, exchange of experience and acquisition of new knowledge. Thirdly, by motivating the team to participate in research and sharing their own experience through publications in specialized publications. Modern medicine is developing at such a rapid pace that quality medical care according to the latest achievements of world medical science and practice can be provided only by specialists who rely on their continuing medical education. To ensure this activity, it is recommended that the hospital management develop an annual plan and investment program for participation in international scientific events, visits to training and certification courses and promoting the scientific activities of its team. In Bulgaria it is often forgotten that continuing medical education is a fundamental, ethical and professional obligation for every medical practitioner. Only by improving their skills and constantly updating their knowledge every doctor is able to take better care of his patients, offering them the latest advances in world medicine.

In turn, documenting, processing data and publishing the results of the clinical practice of a medical institution is an integral part of its function. Every self-respecting hospital must develop scientific activities and share its experience with the medical community and the scientific community. It is good practice for the organizational structure of the medical institution to have a scientific department that coordinates the work of individual medical units and gathers the necessary information for research and preparation of publications of specialists working in the hospital. This department can work in direct contact with all medical units and support the implementation of new methodologies in the medical institution.

Very often the educational activity is separated from the scientific one in a special department. This department is responsible for documenting and organizing the process of training young doctors in the hospital (so-called residents). It monitors the passage through the various modules of the specialization, the inclusion of the residents in the schedule of the medical institution for the proper completion of the diary (logbook) of the resident, for conducting internal exams and colloquia. The other extremely important task of the training department is the continuing medical education of the hospital specialists.

The work of the scientific and educational department is often interconnected. Every medical institution that wants to develop and offer high-quality health care to its patients needs to invest in the continuing qualification of the medical specialists working in it. This is done by encouraging and financing the participation of specialists in the first place in training courses and practical training to acquire new competencies, learn new methods and work with new equipment. Secondly, in the development and financing of a program for participation in scientific conferences, congresses and symposiums for the presentation of their own achievements, exchange of experience and acquisition of new knowledge. Thirdly, by motivating the team to participate in research and sharing their own experience through publications in specialized issues.

If we look back to the results of our study among patients, we must remember that the second most important factor in choosing a medical institution is good service and attitude to the patient. Practice shows that good medics are not always good psychologists and know how to treat their patients in the best way. If the management of the medical institution wants, in addition to good medical results, to achieve high levels of satisfaction among trusted patients, it is necessary to invest in training programs for its medical and administrative staff, aimed at improving communication skills, personalized approach, skills for communicating bad news, skills for dealing with conflicts and communicating with problematic patients.

1. **Recommendations and measures for improving the administrative and non-medical services in the medical institution:**

In the present dissertation several times attention is paid to the fact that patients often do not have the competence and ability to assess the quality of the medical care they receive. However, they very easily assess and form their satisfaction on the basis of the received attitude and personal attention of the hospital staff, as well as on the basis of the received access to information, the non-medical services accompanying their treatment and the overall administrative service. In other words, according to James Merlino of the Cleveland Clinic, the process of improving patient experiences must, like "360-degree management,"17 rely on the patient's overall experience of being met, staying, and discharged from the hospital.

In order to implement this idea, the hospital management can form a team to prepare patients for hospitalization, continuing communication during their stay and organizing their discharge from the hospital. Currently in most hospitals this activity is performed in the reception office by a nurse / midwife on duty, which in most cases meets only the formal criteria for basic information and documentary preparation of the patient. The task of this team is in several directions:

* Preparing patients for hospitalization - by providing assistance in completing all medical, administrative and financial documents and providing information about what awaits them during the procedure and their stay, along with answers to specific questions that concern them;
* Ongoing communication during the patients' stay - visiting the patients after they have already gone through the relevant procedure or in the course of their hospital stay, demonstrating personal attention to their condition, informing if they need something, assistance in resolving certain difficulties or questions;
* Organization of the discharge of patients - providing the necessary medical, administrative and financial documents, providing recommendations for behavior and health regimen after discharge from the hospital, providing contact information with the medical institution if necessary.
* Subsequent contact with the discharged patients - sending e-mail approximately two weeks after hospitalization with a request to complete a questionnaire to assess their stay in the hospital and subsequently a request to positively rated patients to give a positive assessment and recommendation of the hospitals in online rating networks (Google, Facebook).

We have already pointed out that not only the provided medical care and attitude of senior and middle medical staff are extremely important for the overall patient satisfaction, but also the reception and discharge of patients, good administrative organization and polite and personal non-medical care. More and more modern medical institutions in search of better care and attention to their patients are turning in addition to their registry to develop effective contact centers for processing indirect communication by phone and online channels and front offices to serve patients in need of information on site.

The contact center, the reception, the front office and the cash desk of a medical institution are the units for the first and last contact with the patients. They welcome and send the visitors to the hospital and the overall assessment of the patients for the medical institution depends exclusively on them. We will repeat again that very often patients cannot correctly assess the quality of the received medical care, but they understand very well whether they have received good treatment and administrative care. For this reason, the four units listed above play an exceptional role in the increase of the overall level of patient satisfaction with the hospital. In many hospitals, the functions of contact center, reception, front office and cash desk have been merged, but professional patient care requires a distinction between the responsibilities of the four units. The contact center is responsible for indirect communication with patients through various channels such as telephone, e-mail, inquiries through social networks - the contact center fills in schedules and record patients' hours and provides information on all issues of interest to them. The front office is responsible for welcoming patients directly and providing information to those who are directly in the hospital. The registry plays the role of a distributor of patient flows and a registrar of patients in the hospital information system. The cash desk accepts payments to patients by cash or card payment and provides financial information about planned or performed medical care and services. The four units work in direct coordination, but each of them has specific functions that require division of tasks and specialized training. The separation of the four teams allows the processing of a larger number of telephone calls or inquiries through different channels, the care and answering of more patients on the spot, the registration and targeting of a larger flow of patients and the correct acceptance of their payments. All this helps to create a sense of good administrative service in patients and respectively increases their overall satisfaction with the hospital.

In order to better understand the difference in the specific tasks of the four units, we will present their responsibilities below. The duties of the medical secretaries in the contact center should be as follows:

* Provide information and administrative services to patients of the medical institution through the phone and through the online information channels;
* Accept incoming phone calls and make outgoing ones;
* Provide complete, accurate and timely information to patients, comprehensively answering questions, according to their competence;
* If they encounter issues and problems beyond their own knowledge and experience, they must refer them to an employee who can handle the issue;
* Sign appointments for examinations, consultations and diagnostic tests, through the specialized information system, entering the relevant identification data for patients;
* Provide inquiries by phone about the readiness of the results of laboratory tests using the electronic database. The medical secretary does not provide information about the content of laboratory results, does not interpret them, does not diagnose and does not determine the course of treatment;
* Operate the telephone answering and switchboard services, redirecting incoming calls to their recipients. They require the necessary and sufficient preliminary information.

Medical secretaries at the front office must have the following functions:

* Representative: Front office staff are responsible for positively welcoming patients and identifying their on-site visits to the hospital. They provide a sense of care and importance to each visitor. They meet the patients and direct them to the relevant units - registration, cash desk or place them in the lobby to wait until they are received by other employees of the hospital (by appointment). As representatives of the hospital are obliged to have a flawless appearance in accordance with the corporate policy of the organization;
* Informative: In case of need for information, each patient can turn to the front office to be oriented for all medical services offered in the respective hospital. This includes additional financial information, organizational issues or contact with the relevant medical, technical or administrative unit, as well as issues related to the necessary documentation for the various medical activities. Properly prepare and present to patients printed and / or electronic presentations of medical activities. They strive to create a positive image for both employees and medical professionals (helping to choose the attending physician or appropriate medical professional) and for the medical care provided. Inform patients about their opportunity to take advantage of various discounts on loyal patient programs. They check the medical file of the patients and proactively inform them about the possibility to use subsequent medical care from the hospital. If there is dissatisfaction with patients, the front office staff reassures the patient, listens to the case and directs him to the administrative solution to the problem, filing an incoming complaint to be discussed by the medical or administrative management of the hospital;
* Organizational: Additionally, the employees of the front office are in constant contact with the other departments and employees. They organize, welcome, inform and guide patients with special needs. They provide ancillary activities in organizing and conducting special events at the hospital related to welcoming patients and their children. Their task is to distribute the received courier shipments but are not responsible for sending such. They can change a signed appointment of a patient or sign one while communicating with the patients.

Medical secretaries from the registration desk have the following responsibilities:

* Refer patients and visitors to the relevant diagnostic and consulting rooms, laboratories and units;
* Process and store the medical documentation, and upon request from the attending physicians immediately provide it, including controlling its movement;
* Make the necessary inquiries on archived documentation of patients;
* Support the coordination of the teams in the medical institution;
* At the request of the medical staff prepare and format documents and tables using computer word processing programs;
* Work with standard office equipment, reproducing, printing and / or sending by e-mail or fax the relevant documents.

The medical secretaries of the cash desk are required to perform the following duties:

* Register the revenues from sales of medical services, complying with the instructions ensuring the protection of funds. Report the cash availability for the day in the accounting / administration of the hospital;
* Keep the cash book in the form and order established by regulations.
* At the request of patients, issue invoices for payments made, observing the statutory deadline, form and manner of issuance.

The units described above are the part of the administrative staff that are responsible for direct contact with patients. Their role in patient satisfaction is often underestimated, but their communication skills, their ability to deal with communication problems and professional behavior largely depend on the final impressions and positive attitudes that patients will have towards the institution as a whole.

1. **Recommendations and measures to improve communication and relationships with patients in the hospital:**

The communication and the relations with the patients in one medical institution are conducted by the marketing and PR team of the hospital. In most Bulgarian hospitals this function is also underestimated and single employees are appointed to this position, whose main role is to inform the public about the hospital's activities on certain topics, but rarely strategic tasks are provided in line with leading trends in modern medical marketing.

In general, marketing activities in a hospital are conducted according to the rules of classic corporate marketing but they have a number of specifics given the "product" that is offered, namely medical care. The main goal of marketing activities in a medical institution is to gain and build trust between the patients and the hospital.

First of all, it is recommended that each medical institution has a developed marketing plan. The overall marketing plan covers three parts - strategic, tactical and operational plan.

The strategic plan covers the leading directions that the marketing team will develop in the next 3-5 years, in accordance with the main plans for development and growth of the hospital and the vision of its management.

The tactical plan covers a period of 12 months and it is recommended to be prepared each year until October-November and to include all activities that the marketing team plans to implement within the next calendar year with a detailed budget. The annual marketing plan should cover the following parts: annual objectives; basic principles of communication and marketing strategy; mechanisms for achieving the set goals; communication channels; communication tools; budget; time schedule.

In turn, the operational plan covers a period of one month and includes specific activities with written steps for their implementation, budget and responsibilities. In order to monitor the correct implementation of the operational plan and to respond to current changes in the conditions and environment, it is recommended that the marketing team meet once a week to distribute the specific weekly tasks.

The patient attitudes surveys included in ch. III of the dissertation showed that there are two main factors that have a leading influence on patients in choosing a hospital for their treatment. The first factor is the recommendation of relatives and acquaintances. The second factor is information and opinions on the Internet. Based on these results, it is recommended to build the communication strategy of a medical institution.

Marketing and PR activities in a hospital should focus on several groups of activities:

* Working with print, electronic and online media - despite the change in attitudes of information users in recent years, the media still maintains a position in promoting messages and building the image of a company. However, it should be kept in mind that due to the high cost of media appearances, they should be used mainly for image campaigns (campaigns that impose the image of the medical institution) or in crisis situations. The development of online media in recent years and their specialization in certain thematic areas, including purely health-oriented, allows their use to reach target audiences that are of direct interest to medical institutions.
* Organizing events for patients - the continuing communication of the hospital with its patients after their treatment is completed, helps to create community and maintain high levels of satisfaction in them, which create the conditions for making follow-up recommendations and providing public support in crisis situations.
* Creating marketing products - one of the main tasks of marketing is based on market research and customer preferences is to give suggestions for creating new products and services. In the medical field, this is a more difficult task, but the marketing team of a hospital must constantly monitor the development of new technologies in the sector and offer management the implementation of innovative equipment, techniques and methodologies. In addition, various preventive and subscription packages can be created and the introduction of new non-medical and administrative services accompanying the treatment of patients.
* Organizing information initiatives - these are activities aimed at acquainting the public with the care and services offered in the medical institution. These may be Open Doors Days, Schools for Expectant Parents, Information Seminars for Patients on Certain Health Problems and Their Treatment, etc.
* Organizing campaigns - advertising and PR campaigns to promote certain areas of medical care offered by the hospital.
* Creation of printed materials - this includes all informative and advertising printed materials presenting the care and services in the medical institution. They can be provided inside the hospital to patients who are about to undergo a procedure, as well as used with the participation of the medical institution in various external initiatives to potential patients..
* Development of internal information channels - the development and maintenance of the various own channels of communication of the hospital with its patients. They can be a website, a blog, social media profiles, an internal TV channel, a patient newsletter, an internal patient magazine, online forums in specialized online forums, etc.
* Development of partnerships - with patient organizations, companies, institutions, etc.

1. **Recommendations and measures to increase the motivation of the staff in the medical institution:**

The internal motivation of the medical and administrative teams in a hospital has a serious impact on the relations between them and their attitude and communication with patients, and hence on the degree of patient satisfaction. Quite often the team dealing with human resources in Bulgarian hospitals limits its function to the payroll (labor and salary) department. However, the staff of a medical institution is a complex structure that requires significant efforts for professional motivation, dealing with the dangers of “overheating” (the so-called burn out syndrome), measures to unite the team, development of internal communication system and dissemination the strategic decision of management and, of course, the development of the most appropriate remuneration scheme. In order for the hospital management to successfully manage these processes, it is necessary to rely on the strategic building and delegation of powers to a well-functioning Human Resources team to take over the described tasks. First of all, there is a need for all or as many medical and administrative staff to develop self-awareness as part of a team with a common cause and goals, to recognize the mission and strategic visions for the development of the hospital, to accept the organizational culture of the hospital and be motivated to care for and serve her patients in the best possible way. This requires targeted strategic efforts in the direction of development of human resources in the hospital, the development of working internal communication channels, training of staff in the company culture, promoting the success of the hospital and team members among its staff, management changes when necessary.

One of the most important topics in the process of motivating medical teams is their payment, and the most complex is the issue of doctors' salaries. The dissertation examines the two main systems that are applied in Bulgaria with recommendations for their slight transformation and readjustment to be a factor in motivating the medics working in the hospital. The two main types of remuneration systems for doctors that are applied in Bulgaria are a fixed salary and a fee-for-service.

**Fixed salary system:** In the case of a fixed salary, we have a fixed basic remuneration of the medical specialist, which depends on his/her individual agreement with the respective employer on the basis of the specialization, qualification, experience and skills required by employer and offered by the specialist. The fixed salary in the most general case does not depend on the flow of patients passed and the examinations performed, appointed examinations, performed manipulations, etc., by the respective doctor.

The fixed salary system is advantageous for the medical specialist in cases where there is fluctuation (movement up and down) in the flow of past patients and the number of performed medical procedures, manipulations and operations. For example, when there is no constant smooth flow, and the strong months are followed by weak ones without the possibility to predict this in advance. In this case, the medical specialist, although there are periods of overload that do not affect his remuneration, is protected in terms of the level of his salary in subsequent periods of low work intensity and, respectively, insufficient income for the medical institution in which he/she works.

In turn, for the employer this system is advantageous in cases of constant gradual or abrupt increase in the flow of patients, the volume of medical care and, respectively, the financial income received. Through the fixed remuneration of their employees, the medical establishments, enjoying an upward trend of development, manage in the future to reduce the relative share of the expenses for salaries and insurances on the basis of the received incomes. In this way, the management has more resources for investments in various priority areas or for the formation of commercial profits of the companies managed by them.

One of the main shortcomings of the fixed salary system is its insensitivity to changes in patient flows and workloads. From the point of view of the medical specialist, it does not provide an opportunity to stimulate his motivation to care for a larger number of patients, to improve his qualification and respectively his skills to take better care of their treatment, as well as to improve his communication skills in order to increase the satisfaction of their patients after a contact with the specialist. From the point of view of the medical institution, this system brings negatives in two directions. First of all, the management does not have the levers to increase the motivation of doctors to care for more patients and do it better in order to raise the image of the respective medical organization and to attract new patients. Secondly, the management of the medical institution does not have financial protection in the periods of reduced patient flow volumes and performed medical procedures, leading to lower income levels while maintaining levels of salary and insurance costs.

To mitigate and reduce these negative effects, many healthcare institutions combine the fixed salary system with additional financial incentives. Depending on the strategic goals of the medical institution, they can represent direct financial bonuses when passing certain levels of number of cared for patients or performed manipulations / operations or receiving cash bonuses when fulfilling specific goals in terms of income level for a given period. In this way, on the one hand, the motivation of the medical specialists to attract and serve a larger number of patients and, respectively, to help increase the financial income of the medical institution is maintained. On the other hand, the management is protected from the danger that in the strong periods for the health institution the increase of the income levels will be too directly connected with the increase of the expenses for salaries and insurances and thus not enough resources for other strategic expenses.

**Fee-for-service system:** With this system there is a direct link between the amount of examinations performed, manipulations, operations, appointed tests, etc. medical activities and the remuneration of the respective specialist. The "fee for service" strategy assumes that the doctor receives a certain percentage of the income received for each activity performed or assigned by him/her. Thus, the monthly salary of the medical specialist depends entirely on the patients who have passed through his care and the flow of income.

This system presupposes an exceptional motivation of the medical specialist to work more and to take care of a larger number of patients, as his remuneration directly depends on the amount of work done. It is beneficial for the doctor when the hospital is working well and there is a constant increase in the flow of patients to be examined and treated. The authority and good name of the respective specialist built in it is in direct correlation with the number of patients trusted by him/her and respectively his/her remuneration. Accordingly, however, this system can create serious disparities in the amounts received between individual specialists - new and lesser-known doctors may receive significantly lower salaries than those with established large practices. In order to mitigate this negative effect to some extent, the tactic of introducing a minimum guaranteed remuneration is adopted, below which not every medical specialist falls, regardless of the number of examined patients and performed manipulations and operations.

The fee-for-service system is advantageous for the medical institution in the first place in the cases of hiring new doctors who are yet to build their practice. In this way, he will not be burdened with the payment of remuneration that is "not made" by the specialist, as long as he will owe him sums only for the specific number of examinations and other medical activities. Secondly, the system works extremely well for the benefit of the medical institution, when it relies on the personal motivation of individual doctors and teams to care for as many patients as possible. However, this motivation must be combined with a very good valuation of each medical care and a precise calculation of the percentage that must go as part of the remuneration of medical professionals. Under this condition, the increase in the flow of patients and, respectively, the income from the medical activity leads to both an increase in the doctor's remuneration and the profit of the medical institution.

The main advantage of the fee-for-service system is that it is extremely motivating for the activity of the medical specialist and his willingness to care for a larger number of patients within his capacity. This system stimulates competition, constant qualification and the improvement of service and personal attitude towards patients, as only good and caring doctors increase the volume of patients they trust. Among the disadvantages are that to some extent this system leads to negative effects of internal competition of doctors in a medical institution. This can lead to a reduction in the specialization and profiling of health professionals in an effort to "retain" the patient throughout the treatment cycle and not pass it on to another colleague with the relevant specialization. A major drawback in the application of this system for the medical institution can be when there are incorrect estimates of the relative share that each doctor should receive from his medical activities. In the absence of proper calculation, the increase in activity will lead to an increase in cash flows and turnover of the medical institution, but without correlating it with an increase in profit. This is because the operating income will grow at the same rate as the remuneration of the medical staff in a situation of increased costs for consumables and other expenses associated with increasing medical activity.

In order to mitigate the negative effects listed above, two approaches are applied, turning the system from a pure "fee-for-service" into a mixed type. First of all, the introduction of a guaranteed minimum wage is applied, which will keep the basic levels of motivation of all doctors with the perspective that it will depend on their activity whether these levels will be exceeded and more attractive pay will be received. Secondly, a step-by-step model of the due remunerations for the respective medical activities according to the performed volumes is introduced. For example, in the case of a unit of volume for a given period, a certain percentage of the income from the respective activity is due, in case of an increase of this volume to certain levels for the excess, an increased or decreased increase again there is a change in the percentage of remuneration due. In this way, the motivation of the medical specialist to perform a larger volume of activities is preserved. At the same time, however, the medical institution is protected from the danger that the costs of remuneration will increase at the same rate of income from medical activities and thus will not increase the rate of profit.

1. **Recommendations and measures for improving the internal environment and the medical infrastructure in the medical institution:**

One of the tasks of the management team of a medical institution is to offer and initiate improvements in the interior spaces of the hospital in order to improve the comfort, positive perceptions and better orientation of its patients. In carrying out this task, management must be guided by the main characteristics and specifics that the hospital infrastructure and interior environment must have, such as productivity and efficiency, flexibility and expandability, therapeutic environment, cleanliness and hygiene, accessibility, human flow control, aesthetics, security and safety and sustainability. Below we will dwell in a little more detail on the requirements for the performance of each of the described characteristics.

Regardless of their location, size and budget, the infrastructure of medical institutions must have the following attributes:

**Productivity and efficiency.** Effective hospital infrastructure must:

- Support staff productivity by reducing distances between frequently used spaces / rooms;

- Allow easy visual control of patients by a limited number of medical staff;

- Include all the necessary specialized medical facilities, but does not require the separation of unnecessary ones;

- Provide an efficient logistics system for the transfer of hospital food, clean medical instruments, materials and consumables and disposal of household and hospital waste, contaminated tools, used materials and consumables, etc.;

- Facilitate the efficient use of hospital space by arranging maintenance facilities in such a way that they can be shared by nearby functional units and provide for the reasonable use of multifunctional facilities;

- Have outpatient activities on the first floors with the possibility of direct access to of such patients;

- Group or combine functional areas with similar material requirements;

- Provides optimization of the adjacent location of the connected functional units - e.g. the intensive care unit should be located near the operating rooms.

**Flexibility and expandability.** Due to the fact that medical requirements and treatment options are constantly changing, the hospital infrastructure must:

- Follow the modular concepts for space planning and internal distribution (allowing easy transformations for functions and purpose)

- Relies on general dimensions and plans of hospital rooms and offices, instead of too specific purposes (those that cannot be subsequently transformed into rooms with other functions)

- Relies on modular, easily accessible and easily modifiable systems (electricity, Heating, ventilation and air conditioning systems, plumbing, etc.)

- Be open-ended with well-planned guidelines for future development and expansion - for example, positioning "soft" spaces (those that can be easily changed by function) as administrative premises, near "hard" spaces (those whose functions difficult to change) as clinical laboratories.

**Therapeutic environment.** Patients undergoing hospital treatment are often frightened and confused, and this can make it difficult for them to recover. For this reason, every effort should be made to make the hospital infrastructure and environment as hospitable, comfortable and stress-reducing as possible. Interior design, which is part of the hospital infrastructure, must meet these requirements and provide a good therapeutic environment. The interior design must be based on a thorough understanding of the mission of the respective medical institution and the profile of its patients. The characteristics of the respective patient profile will determine to what extent and how the interior layout and interior infrastructure will address age, specific condition, certain physical and mental limitations, etc. Some important aspects in creating a therapeutic internal infrastructure are:

- The use of known and culturally relevant materials;

- The use of cheerful and varied colors, given that some colors are inappropriate and can confuse the relevant specialist's assessment of the paleness and color of patients' skin, worsen the orientation of older patients or disturb patients (for example, those with psychiatric illness) and staff;

- Provision of sufficient access to external light where possible and the use of interior lighting with colors as close as possible to daylight;

- Provision of a view of the external environment in the hospital stay rooms and wherever possible. Where there is no access to external views, the use of natural photographs or paintings is recommended;

- Creating an easy-to-navigate internal infrastructure. Patients, visitors and hospital staff need to know at all times where they are, where their destinations are and how to get to and from there. Patients' sense of calm is supported when the various specialized facilities they need to visit can be easily found and identified without asking for help. Infrastructure elements, colors, signs must give clear signs of the location and destinations sought.

**Cleanliness and hygiene.** Hospitals should be easy to clean and maintain. This can be facilitated by:

- Suitable, durable surfaces in any medical and service room;

- Careful selection of door frames, consulting rooms and transitions between different surfaces to avoid accumulating dirt and difficult to clean cracks and joints;

- Sufficient number and properly located bathrooms;

- Special materials and surfaces that can be kept sterile. Modern antimicrobial coatings are a good solution for certain spaces;

- Application of algorithms for maintaining a hygienic indoor environment.

**Accessibility.** All indoor and outdoor areas of the hospital infrastructure must:

- Meet the requirements for easy access for patients with temporary or permanent difficulties in movement or orientation;

- Provide easy access, movement and passage of patients with wheelchairs;

- Ensure that entry / exit areas are designed to support patients with limited ability to adapt to light. All glass doors and windows must be appropriately marked so that they can be easily seen.

**Human flow control**. Each hospital is a complex system of interrelated functions that require constant movement of people and materials. Most of this flow needs to be controlled.

- Outpatient areas should not intersect with hospital treatment and stay areas;

- Frequently used routes of outpatients should be easy to navigate and clearly marked;

- External visitors should have an easy and direct way to the registration desk without crossing other hospital functional areas;

- Patients and visitors must be separated from logistics areas or floors;

- The transport of the deceased must be carried out on routes where there are no patients or visitors;

- It is necessary to establish service elevators designed for the logistical needs of the hospital.

**Aesthetics.** Aesthetics in hospital infrastructure is directly related to the creation of a therapeutic environment. It is important for improving the public image of the medical institution, which is why it is an important marketing tool. A better indoor environment leads to more motivated staff and better patient care. Maintaining good aesthetics in hospital infrastructure includes:

- Increasing access to natural light, the use of natural materials and fabrics;

- Placing paintings and other decorations;

- Attention to proportions, colors and interior details;

- Construction of bright, open and free common spaces;

- Creating a close to home environment and atmosphere in hospital rooms, offices and waiting rooms for patients;

- Connection of the exterior design of the building with the surrounding space.

**Security and safety.** In addition to the standard security measures for each building, hospital buildings must be provided with:

- Protection of hospital property and consumables, including medicines;

- Protection of patients, including those in bed, and hospital staff;

- Protection against aggressive and unstable patients;

- Protection against terrorist acts due to the fact that medical institutions are public buildings with an important role in urban and public life.

**Sustainability.** Hospitals are large public buildings that have a major impact on their surroundings and on the economy of the community in which they are located. They are a serious consumer of energy and water and generate large amounts of waste. Due to the fact that they are so important for society and the urban environment, their infrastructure must above all comply with the requirement for long-term sustainability.

1. **CONCLUSION:**

In the first two decades of the 21st century, world medicine has finally undergone a transformation from a paternalistic approach to a patient-centered system. Patients are increasingly involved in the decision-making process for the prevention, diagnosis and treatment of their health, and doctors and medical professionals must rely on the development not only of their medical skills and professional qualifications, but also of communication and politeness skills and careful treatment of the patient. In world medicine, the time is coming not just for the informed consent of the patient, but for the informed decision about the plan of behavior in the diagnosis and treatment of health problems, due to which he/she turned to the relevant medical institution and medical specialists.

In this situation, the topic of patient satisfaction will occupy an increasingly central place in modern healthcare and medical practice. From now on, health management professionals will need to explore the relationship between the quality of care and patient satisfaction. The present analysis identified the main factors influencing it, concluding that they form a complex combining quality of diagnostic and therapeutic activities, good attitude of medical staff and good service from administrative staff, quality hospital infrastructure, interior environment in combination with high-tech equipment. Only in the right balance between these factors can a medical institution maintain a high level and take good care of its patients, ensuring their satisfaction.

The analysis found that satisfaction is an important indicator of quality that measures the success of a medical institution. The patient assessment of the provided medical care and non-medical services in a medical institution is an important prerequisite in order to enable its management to make the necessary improvements through strategic planning and changes in hospital care and administrative services.

In the end, the development of the competition in Bulgarian healthcare and the assertion of the rights and role of the patient in the decision-making process for preventive and diagnostic-therapeutic activities related to his/her health, make the topic of satisfaction increasingly relevant. It is certain that in the future the patient assessment of the provided medical care and administrative services will require us to deepen our knowledge of the factors influencing this assessment, its correct measurement and the conclusions we draw based on the results obtained. All this gives the reason to believe that the conclusions made and the proposed recommendations in this dissertation will be useful not only in terms of theoretical understandings of patient satisfaction, but also for the practical work of hospital managers in Bulgaria to improve the performance of their hospitals.

1. **CONTRIBUTIONS OF THE DISSERTATION:**

* A system of the basic concepts related to patient satisfaction is presented through a comprehensive theoretical review of the specialized literature, examining the topics of patient satisfaction, its measurement and its use as a prerequisite for improving the quality of medical care and administrative services in the hospital;
* They are presented on the principles and factors influencing the satisfaction of patients in Bulgaria as a prerequisite for improving the quality of medical care and non-medical care;
* For the first time in Bulgaria, through a detailed survey approach among three groups of respondents (patients, doctors and health managers) in hospitals, the practical views of the three groups on the factors influencing patient satisfaction were presented;
* An in-depth assessment of the importance of the various factors influencing patient satisfaction in Bulgaria has been performed and an order of these factors in order of importance has been presented.;
* A set of recommendations, measures and improvements in the medical institution for increasing patient satisfaction as a prerequisite for improving the quality of hospital medical care and administrative services is presented. The proposed measures have been tested in the practice of the Medical Centre "Dr. Shterev".

1. **PUBLICATIONS:**
2. Тодоров И., Принципи и фактори, влияещи върху удовлетвореността на пациенти в АГ болница за активно лечение. GP News 2020, 33-38
3. Тодоров И., Костадинова Т., Изследване на водещите фактори, влияещи върху пациентската удовлетвореност в клиника за асистирана репродукция – споделяне на опита на Медицински комплекс „Д-р Щерев“, Репродуктивно здраве 2020, 35-40
4. Тодоров И. Използване на изкуствен интелект (AI) и съвременните платформи за дигитална комуникация за подобряване на ежедневното общуване с пациентите и тяхната удовлетвореност. Медицинско право и здравеопазване 2020, 68-77
5. Тодоров И. Използване на изкуствен интелект и съвременните платформи за дигитален маркетинг за подобряване на ежедневната комуникация и удовлетвореността на пациентите в АГ болница, GP News 2021, 37-41
6. Тодоров И. Проучване сред лекари, здравни мениджъри и потребители на медицински грижи на основните фактори, влияещи върху удовлетвореността на пациентите в болница за активно лечение. Доклади на IX Научна сесия за преподаватели и студенти, Медицински университет - Варна 2021
7. Тодоров И. Подобряване на пациентската удовлетвореност чрез използване на възможностите на съвременните информационни технологии, Доклади на Международна интердисциплинарна алумни среща на „Алумни клуб и приятели“ на Медицински университет - Варна 2021
8. Todorov I., Principles and Factors Influencing Patients Satisfaction in an Ob./Gyn. Hospital in Bulgaria. WayScience 2nd International Scientific and Practical Internet Conference on “Integration of Education, Science and Business in Modern Environment: Winter Debates” 2020, 108-110
9. Todorov I., Kostadinova T, Shterev A. Use of Artificial Intelligence (AI) and Modern Digital Marketing Platforms to Improve Daily Communication and Patient Satisfaction at an Ob./Gyn. Hospital. WayScience 2nd International Scientific and Practical Internet Conference on “Integration of Education, Science and Business in Modern Environment: Winter Debates” 2020, 111-113

1. Boneva S. Quality, standardization, standards - essence, meaning, interrelation. Science and Technologies. 2013 [↑](#footnote-ref-1)
2. Todorov I., Kostadinova T., Study of the leading factors influencing patient satisfaction in an assisted reproduction clinic - sharing the experience of the Medical Centre "Dr. Shterev", Reproductive Health 2020, 35-40 [↑](#footnote-ref-2)
3. Anhang Price R., Elliott M.N., Zaslavsky A.M., et al. Examining the role of patient experience surveys in measuring health care quality. Medical Care Research and Review. 2014 [↑](#footnote-ref-3)
4. Gustafsson S. Patient Satisfaction With Telephone Nursing A Call for Calm, Clarity, and Competence. Journal of Nursing Care Quality. 2020 [↑](#footnote-ref-4)
5. Charles L., Bardes M., Defining “Patient-Centered Medicine”, New England Journal of Medicine. 2012 [↑](#footnote-ref-5)
6. Hadeler E. Definitions, survey methods, and findings of patient satisfaction studies in teledermatology: a systematic review. Archives of Dermatological Research. 2021 [↑](#footnote-ref-6)
7. Donabedian A. An introduction to Quality assessment in Health Care. 1ed. America Oxford University press. 2003 [↑](#footnote-ref-7)
8. Jenkinson C, Coulter A, Bruster S, Richards N, Chandola T. Patients' experience and satisfaction with Health Care: Results of a questionnaire study of specific aspects of care. Quality and Safety in Health Care Journal. 2002 [↑](#footnote-ref-8)
9. Burgener A. Enhancing Communication to Improve Patient Safety and to Increase Patient Satisfaction. The Health Care Manager. 2020 [↑](#footnote-ref-9)
10. Kathryn, A. David A. Susan, M. The Role of Clinical and Process Quality in Achieving Patient Satisfaction in Hospitals. Decision Sciences. 2004 [↑](#footnote-ref-10)
11. Saultz J., Albedaiwi W. Interpersonal Continuity of Care and Patient Satisfaction: A Critical Review. Annals of Family Medicine, 2004 [↑](#footnote-ref-11)
12. Chang J., Hays R., Shekelle P., et al. Patients’ global ratings of their health care are not associated with the technical quality of their care. Annals of Internal Medicine.2006 [↑](#footnote-ref-12)
13. Merlino J., Raman A., Health Care’s Fanatics. Harvard Business Review. Mosby's Medical Dictionary. Elsevier. 2013. [↑](#footnote-ref-13)
14. Ann K., Matthew D., et al. Nursing: A Key to Patient Satisfaction, Health Affairs. 2009 [↑](#footnote-ref-14)
15. Ann K., Matthew D., et al. Nursing: A Key to Patient Satisfaction, Health Affairs. 2009 [↑](#footnote-ref-15)
16. <http://www.who.int/medical_devices/priority/core_equipment/en/> [↑](#footnote-ref-16)