

ABOUT THE IMPORTANCE OF MONITORING NON-MEDICAL EXPECTATIONS OF SURGICAL PATIENTS

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The article presents the results of a questionnaire survey of 197 patients who received inpatient treatment at the Vladikavkaz Junction Station Hospital of Russian Railways JSC. The questionnaire included 26 questions structured according to the levels of work and reflecting the parameters of non-medical expectations of patients. 85 patients of the surgical profile were included in the group I, and 112 patients of the therapeutic profile were included in the group II.

The result: the group I demonstrated significantly lower rates of patient satisfaction with the level of social and living conditions when receiving medical care and regarding the compliance with the patients' rights. The average satisfaction rates of patients in the groups were 0.92 ± 0.02 and 0.98 ± 0.02 , which generally characterizes the level of social efficiency of the hospital as high.

The measures of an educational, economic, disciplinary and scientific-public nature were introduced at the hospital to improve the level of responsiveness of the health system. A structured approach to the organization of population studies among individual groups of patients allows identifying hidden defects in the system of ensuring non-medical expectations of the population and organizing their targeted elimination.

Keywords: healthcare, social effectiveness, questionnaire survey, satisfaction rate.

О ЗНАЧЕНИИ МОНИТОРИНГА НЕМЕДИЦИНСКИХ ОЖИДАНИЙ ХИРУРГИЧЕСКИХ ПАЦИЕНТОВ

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В статье представлены результаты анкетирования 197 пациентов, получивших стационарное лечение в "Узловой больнице на станции Владикавказ ОАО "РЖД". В анкету вошли 26 вопросов, структурированных по уровням работы и отражающих параметры немедицинских ожиданий пациентов. В I группу были включены 85 пациентов хирургического профиля, а во II группу – 112 терапевтических пациентов.

В результате: в I группе были получены достоверно худшие показатели удовлетворенности пациентов уровнем социально-бытовых условий при получении медицинской помощи и соблюдением их прав. Средние коэффициенты удовлетворенности пациентов в группах составили $0,92 \pm 0,02$ и $0,98 \pm 0,02$, что в целом характеризует уровень социальной эффективности больницы, как высокий.

Для повышения уровня отзывчивости системы здравоохранения в больнице были внедрены меры образовательного, экономического, дисциплинарного и научно-публицистического характера. Структурированный подход к организации популяционных исследований среди отдельных групп пациентов, позволяет выявить скрытые дефекты в системе обеспечения немедицинских ожиданий населения и организовать их целевое устранение.

Ключевые слова: здравоохранение, социальная эффективность, анкетирование, коэффициент удовлетворенности.

The health system (HS), as defined by the World Health Organization (WHO), refers to the totality of different organizations, institutions and resources intended for action in the interests of public health [1]. The WHO proposed four main areas for evaluating any health system and model: the development of the resource base necessary for the functioning of the system, the distribution of finance, ensuring the rational use of resources and the implementation of expectations of the patients and the preservation of their trust in the system [3].

In modern conditions, it should be recognized that it is impossible to ensure the consistency of the quality of surgical care with an ever-increasing level of expectations of the population without improving the material and technical base, the introduction of modern surgical treatment technologies, the development of the principles of biomedical ethics, and also without the introduction of a scientific and methodical approach to monitoring non-medical needs of patients and the introduction of innovative forms of professional development of young surgeons [2, 5-7, 11, 12].

It is gratifying to note that the national medical community has actively joined the development and implementation of the concept of health system responsiveness (HSR), which is an important non-clinical indicator of the effectiveness of its functioning, reflecting

the response of the health system to non-medical expectations of the population [8, 12].

The proper level of the HSR, in its application significance, reflects the 15 bioethics principles declared in the *UNESCO Universal Declaration on Bioethics and Human Rights* [9] and provides each patient with:

- freedom of choosing healthcare providers;
- accessibility and provision of decent living conditions when obtaining medical care;
- respect for human dignity;
- respect for the principles of confidentiality and autonomy;
- participation of patients in the decision-making process;
- satisfaction with the quality of communication with the medical staff;
- transport accessibility and the ability to communicate with the outside world;
- consideration of vulnerability and special needs of all population groups.

The patient satisfaction structured by components of the medical service provided is an indicator of the HSR, which monitoring involves the population studies of different levels and designs [10, 13]. The social effectiveness (SE) of such studies is to identify hidden problems in the system and the possibility of their targeted elimination with minimal losses for other components.

The nontriviality of the conceptualization of the SE problem of modern health system becomes more evident if one draws attention to the fact that, despite the joint efforts of state structures and professional associations of medical workers, there is currently no common understanding of the mechanisms for shaping the opinion of consumers of medical services on the quality of medical care, as well unified methodological approaches to the assessment of the HSR to the needs of different social groups of the population [8].

In the European countries, in 2010, the Committee of Ministers of the European Union approved the recommendations R(2010)6 "On Good Governance in the Health Care System", regulating the conduct of sociological surveys among patients on satisfaction with the level of compliance with their rights, with the need to bring the results of these studies to the public. Considering that the Russian federal, departmental and regional health authorities have recently adopted the practice of questioning patients about the satisfaction with compliance

for their rights, the availability of the results of these studies to the public is not yet being discussed. Moreover, one of the main factors determining the reliability of research results of this kind is the quality of design and the level of qualifications of researchers [11].

The formalized approach to the performance of the duties of all medical personnel, enshrined in regulatory regulations to ensure a high level of quality and safety of medical activities, is the basis for ensuring the proper level of the HSR. The daily clinical practice imposes demands on doctors that go beyond their official powers that are regulated by the medical law [4, 8, 10]. This can be seen by the examples of the wide variability in the implementation of the patient's right to voluntary informed consent to medical intervention [7, 13], and to other terms that determine the meaning of the concept of "social effectiveness".

With the purpose of revealing the hidden defects of the SE at the level of individual structural units and determining ways to increase the work of the hospital, a program was developed and implemented at the Non-state Healthcare Institution Vladikavkaz Junction Station Hospital of Russian Railways JSC to receive feedback through a population-based study among patients in 2014-2015.

Material and methods.

The design of the study was planned in such a way that the employees of the profile department were not involved in the questioning procedure. According to the organizers of the study, the employees directly involved in the treatment of interviewed patients were not informed about the nature of the study. At the same time, the organizers deliberately predicted, to some degree, the inferiority of patients' answers to a number of questions that could not be understood unequivocally by everyone, but thus we achieved greater objectivity of results and "purity" of conclusions.

The questionnaire included 26 questions structured according to the areas of activity of various departments of the Junction Station Hospital and the parameters of socially significant, non-medical expectations of patients. The initiators believed that the questions reflected the patients' opinion on all the structural units of the hospital and were designed to characterize the activities of personnel at all levels of the Junction Station Hospital and contained, in particular, integrally expressed characteristics.

This work is based on the results of the statistical analysis of the results of the survey of 197 respondents who received inpatient treatment. The analysis was carried out taking into account grouping of patients on the main medical component. The group I (primary) included 85 patients after elective surgeries from the surgical departments. The group II (comparison) included 112 patients from the department of internal medicine.

In the group I, the share of the urban population was 70.5%, women were 87%, and 83.5% were working-age population. In the group II, the urban population accounted for 73.2%, 79.5% were women, and 80.3% were working-age population.

Statistical analysis was performed on a PC using Microsoft Access 7.0 and Microsoft Excel 7.0. The data are presented in the form $M \pm m$, where M is the mean, m is the standard error of the mean. The Student's test was used when comparing the average values in different groups. The difference in the indices was considered statistically significant at $p < 0.05$.

Results and discussion.

72 respondents from the group I ($84.7 \pm 3.9\%$) and 100 patients from the group II ($89.3 \pm 2.9\%$) did not experience difficulties in hospitalization in the Junction Station Hospital ($p > 0.05$). 11 patients ($12.9 \pm 3.6\%$) of the surgical profile evaluated the difficulties they experienced in hospitalization as unimportant, and two ($2.4 \pm 1.6\%$) evaluated them as very significant. As for the therapeutic patients, only 11 of them ($9.8 \pm 2.8\%$) attributed the difficulties with hospitalization to the category of nonessential ones, and only one patient (0.9%) experienced significant difficulties at the pre-hospital stage.

Despite the high overall availability of hospitalization, we believe that one of the ways to improve the organization of work with surgical patients is the provision of conditions for eliminating formal and technical barriers to fast hospitalization. The study made it possible to establish that the total proportion of those dissatisfied with this component of our work among surgical patients was $15.3 \pm 3.9\%$. This should be considered as a serious reserve of increasing the efficiency of work, taking into account the current high competition in the market for medical services. The Junction Station Hospital was guided by these goals when initiating the development and approbation of a local protocol within the framework of the

concept "*Fast Track Surgery*" that was potentially designed to reduce the duration of hospital treatment.

The legal block of questions was an area of our special interest. When assessing the completeness and quality of patient awareness of their rights and responsibilities, statistically significant differences were found in the groups. Thus, 7 respondents ($8.2 \pm 3.0\%$) from the group I indicated that they were not informed about their rights and duties properly, while in the comparison group II, a significantly smaller number of such cases was detected—only two ($1.8 \pm 1.2\%$) ($p < 0.05$)

When answering the question about the fact of written registration of informed consent, the same $8.2 \pm 3.0\%$ of respondents ($n=7$) from the group I did not confirm it, and this response was received from only one patient (0.9%) in the group II ($p < 0.05$).

A separate question was focused on the opinion of patients about the opportunities to ask their attending doctors any questions related to their health condition. Among the surgical patients, 79 ($92.9 \pm 2.8\%$) considered that they had every opportunity to adequately secure this right, two patients ($2.3 \pm 1.6\%$) did not have such opportunity at all, and the remaining four ($4.8 \pm 2.3\%$) believed that this right was partially satisfied. For comparison, nobody among the therapeutic patients felt deprived of this legal right ($p < 0.05$).

The result of the survey revealed that this section of work at the Junction Station Hospital for the surgical patients should be recognized as that of an unacceptably low level of effectiveness, which requires a targeted elimination of shortcomings. One cannot help but point out that these conclusions became possible only as a result of the sociological study of patients. When conducting an expert evaluation of each completed case as part of the quality control and safety of medical activities, all 100% of the inserts about the patient's informed consent forms were filled out and signed by the patient and the doctor.

Overall at the Junction Station Hospital, $89.3 \pm 2.2\%$ of respondents were satisfied with the provision of medicines at the expense of insurance companies. However, when analyzing this indicator, variable results were found in the comparison groups. Thus, in the group I, 66 patients ($77.6 \pm 4.5\%$) confirmed full satisfaction with the provision of medicines at the expense of insurance companies, which is significantly lower than in the group II where 110 respondents ($98.2 \pm 1.2\%$) were fully satisfied

with the provision of medicines ($p < 0.001$). 13 respondents among patients in the surgical department ($15.3 \pm 3.9\%$) were partially satisfied, two ($2.4 \pm 1.6\%$) were unsatisfied, and four ($4.7 \pm 2.3\%$) found it difficult to answer. In the II group, $98.2 \pm 1.2\%$ consider themselves fully satisfied with insurance coverage and only 1.8% found it difficult to answer this question.

If $22.8 \pm 3.0\%$ of patients ($n=45$) acquired additional medications during their treatment at the hospital, then there were no statistically significant differences in this important indicator at the profile departments: 23 patients ($27.1 \pm 4.8\%$) in the group I and 22 patients ($19.6 \pm 3.7\%$) in the group II ($p > 0.05$). $17.6 \pm 4.1\%$ of surgical patients ($n=15$) and $15.2 \pm 3.4\%$ ($n=17$) of therapeutic patients had to pay for additional examinations ($p > 0.05$). Other patients confirmed the satisfaction with the availability of the diagnostic complex at the Junction Station Hospital.

According to our data, the need for additional material costs for their treatment is not a criterion of an extremely low quality of medical services for patients. Thus, according to an integral assessment of the quality of care in the laboratories of the hospital by patients, the average score on a 5-point scale was 4.22 ± 0.11 in the group I, and 4.54 ± 0.06 ($p < 0.05$) in the group II. However, the achieved reliability in the lower evaluation of this section of medical care by surgical patients should alarm the organizers of the healthcare system and shows the greater importance of an integrated approach to BP in surgery, at least in the context of observing the legal rights of surgical patients.

The quality of nutrition was on average estimated by respondents from the group I to be 4.26 ± 0.1 points, and 4.55 ± 0.2 points by the group II ($p > 0.05$), confirming the unacceptably high dissatisfaction of surgical patients with this important component of ensuring the level of their non-medical expectations. Although in absolute terms, patients of both groups appreciated the quality of nutrition at the Junction Station Hospital.

One of the final questions was as follows: "*How would you define your attitude towards the hospital (in points) as a whole?*" Although the opinion of respondents was high on the whole, there were still significant differences between the compared groups, with a greater degree of negativity in surgical patients, expressed in the

average of 4.61 ± 0.06 points in the group I and 4.81 ± 0.04 points in the group II ($p < 0.01$).

All 100% of the therapeutic patients answered in the affirmative to the final question of the questionnaire: "*Would you like to receive medical assistance in our hospital in the future?*", which cannot be said about surgical patients, of which 9 patients (10.6%) do not intend to be treated at the Hospital in future ($p < 0.01$).

The HSR assessment report form adopted by the public health institutions of Russian Railways provides for the calculation of the integral patient satisfaction rate (PSR) for individual components of the work. Calculation of $PSR = (\text{number of patients satisfied} / \text{total number of respondents})$. When taking into account the parameters with a score, the satisfaction criterion corresponded only to values of 4 and 5 points.

The final rates of patient satisfaction for 2015 are reflected in the Table.

Table

Group	Patient satisfaction rates in comparison groups					
	PSR 1	PSR 2	PSR 3	PSR 4	PSR 5	AvP SR
Group I	0.92 ± 0.02	0.94 ± 0.04	1.0	0.91 ± 0.02 *	0.85 ± 0.03 *	0.92 ± 0.02 *
Group II	0.96 ± 0.04	1.0	1.0	0.99 ± 0.03 *	0.96 ± 0.04 *	0.98 ± 0.02 *

* $p < 0.05$ when comparing the groups

When assessing the individual components reflecting the state of measures to ensure the patient satisfaction at the Junction Station Hospital, it was found that the satisfaction rates of the activity of the polyclinic and diagnostic departments of the Hospital (PSR 1), the work of the attending doctor (PSR 2) and nursing staff (PSR 3), were high in both groups of comparison, without demonstrating reliable intergroup differences.

At the same time, such important results as satisfaction of patients with the level of social and living conditions when obtaining medical care (PSR 5), and most importantly, the patient satisfaction with compliance with the patient's rights (PSR 4), were significantly lower in the surgical departments ($p < 0.05$) than in the comparison group. Formation of the patient satisfaction rate (PSR 4) was carried out based on the summarizing the results of the questionnaire on patient awareness of internal regulations at the Junction Station Hospital and about their rights, the opportunity to ask a doctor any questions, confirmation of the fact of written informed consent to all treatment

components, satisfaction with the provision of medicines at the expense of insurance companies.

The average rate of satisfaction of patients with all components (AvPSR) confirmed the revealed tendencies.

The study did not reveal specific features of the increased social demanding that are typical for surgical patients; rather, we are inclined to attribute the difference in the results obtained due to the different quality of ensuring the level of non-medical expectations in different profile departments. The subsequent work was organized precisely in this direction.

In general, the results of the study aimed at determining the ways to increase the SE of the activity of our institution can be considered satisfactory, since the goal was achieved and the main areas for improving this work were identified.

Taking into account the preliminary results of the assessment of the level of organization of the work on raising the HSR at the Junction Station Hospital, a set of measures was developed and implemented to improve the organizational technologies for providing medical assistance, including educational, economic and disciplinary measures. For surgical patients, the practice of obtaining an informed consent for certain types of medical care has been introduced. In addition to optimizing the work of the medical commission on the control of the quality and safety of medical activities, scientific and journalistic measures were introduced to increase the individual professional responsibility of medical workers.

A serious reserve in raising the level of professional development of medical workers, including in the field of implementation of non-medical expectations of patients, is the involvement of doctors from the non-academic environment in scientific activity. The Junction Station Hospital, in addition to many years of cooperation with the North Ossetian State Medical Academy, developed measures to stimulate the participation of employees in scientific forums, the publication of scientific papers in high-level publications. Thus, more than 20 employees of the Hospital became co-authors of scientific reports in 2014-2015, they published over 15 articles in peer-reviewed journals on the results of research on topical areas of medicine.

To ensure a high level of information support for the treatment process at the Hospital, manuals for

physicians were published during the past two years: "*Fundamentals of Patient Rights Protection*" and "*Legal Foundations for Patient Safety*", as well as an informational guide for patients: "*What Should a Patient Know? Legal Foundations of Medical Care*" that is available in all structural units and on all information stands of the Hospital.

Conclusion.

Thus, a social assessment of the functioning of a medical institution, along with the improvement of measures of a curative and economic nature, is an indispensable condition for the development of a modern health system.

The high level of planning and implementation of anonymous patient questionnaires is an effective tool for monitoring the social effectiveness of the medical institution, which allows implementing adequate measures to target the deficiencies in the management of a modern medical institution.

A structured approach to the organization of population studies among individual patient groups allows identifying hidden defects in the system of ensuring the non-medical expectations of the population and organizing their targeted elimination with minimal losses for the system as a whole.

Involvement of employees of the medical organization to scientific and journalistic activity is one of the forms of continuous professional education. Such measures, along with regulated measures and improvement of various forms of information support for the treatment process are a non-standard way of increasing the social efficiency of a medical organization.

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