

The results of a subjective assessment of the organization of inpatient care for newborn parents and neonatologists

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Abstract

Aim. To study the opinion of mothers of newborns and neonatologists about the organization of inpatient care for newborns in St. Petersburg.

Methods. An anonymous survey of 2123 mothers of newborns and 172 neonatologists of St. Petersburg was conducted. The representativeness of the sample was checked by using the method of Professor A.M. Merkov, with the errors do not exceed 4 and 3%, respectively. Mathematical processing and data analysis were carried out by using the statistical software package PASW STATISTICS.

Results. 28.9% of mothers were partially or completely unsatisfied with the organization of inpatient care for newborns, in most cases due to the unfriendly and inattentive attitude by the medical staff (22.4%), the unsatisfactory provision by child care products (12.8%) and poor material and technical equipment of a medical organization (12.5%). On average, the human qualities of neonatologists were rated quite high by mothers at 4.63 ± 0.09 (out of 5) points, and in mid-level practitioners were significantly lower — 3.91 ± 0.08 points ($p < 0.05$). In general, staying a newborn in a medical organization required financial costs for 37.3% of women, and 13.9% of respondents who received help through compulsory medical insurance paid for individual laboratory and other tests on their own. Mothers rated the organization of inpatient care for newborns on average 4.01 ± 0.09 points. Compared to mothers, neonatologists rated it higher in the medical organization they work for and lower overall in St. Petersburg ($M=4.11 \pm 0.10$ points and $M=3.78 \pm 0.12$ points; $p < 0.05$). According to the doctors, the main disadvantages of organizing inpatient care for newborns are poor material and technical equipment and problems associated with the staffing and qualifications of medical personnel.

Conclusion. There is a need to improve the process of providing inpatient care to newborns.

Keywords: mothers of newborns, neonatologists, inpatient care, organization of medical care for newborns, causes of dissatisfaction.

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Background

In modern times, when reducing the birth rate became a problem of national security for the Russian state, improving the quality and availability of medical care for children has particular importance [1–3]. According to 323-FZ of 21.11.2011, “On fundamental healthcare principles in the Russian Federation,” the priority of children's health protection is one of the fundamental principles of the health care system. In 2017, to improve the state policy in the field of child protection, the decree of the President of Russia 2018–2027 in the Russian Federation, they declared the Decade of Childhood [4]. In this regard, at both the state and regional levels, a significant number of programs and projects were developed and integrated into the activities of medical

organizations aimed at strengthening and preserving the health of children, starting from birth [5].

During the newborn period, the child adapts to changes in environmental conditions, and he/she is most vulnerable to external factors. So, care and medical care in the first month largely define the state of the child's health, not only in the infancy but also in the subsequent years of his/her life. [6, 7]. In the Russian Federation, newborns receive hospital care in maternity organizations and children's multi-specialty hospitals. The lives and health of young patients largely depend on the level of organization of this medical care [8].

Considering that parents and doctors see the strengths and weaknesses of medical care differently, it is advisable to evaluate its organization for

newborns from these two perspectives. This will allow not only the determination of the factors that negatively affect the delivery of health care to children in the hospital but also the identification of positive and negative trends that occur at work in health institutions in general [9,10]. Thus, the study of the opinions of mothers and neonatologists can serve as a guide for further improvement of the organization of medical care for newborns.

The aim of the study is to study the opinion of mothers of newborns and neonatologists about the organization of hospital care for newborns in St. Petersburg.

Materials and methods

This study was conducted in St. Petersburg, a city with federal status, which is a separate subject of the Russian Federation. The organization of hospital care for newborns was evaluated using data that were taken from a comprehensive study on the organization of medical care for newborns in St. Petersburg. This study was an anonymous survey that was designed for mothers of newborns in medical organizations and neonatologists in St. Petersburg.

Two questionnaire forms were developed specifically for this study: “Questionnaire for a newborn mother” and “Questionnaire for a neonatologist.” An anonymous survey of 2123 mothers of newborns and 172 neonatologists who performed their professional activities in state medical organizations in a hospital setting was made with the help of a random sampling technique to evaluate the organization of hospital care for newborns. Consent was obtained to fill out the questionnaire.

The survey of mothers was conducted in the neonatal care units of two children's multidisciplinary hospitals in St. Petersburg: the St. Olga Children's Municipal Hospital and the St. Nicholas the Wonderworker Children's Municipal Hospital (47.2% of mothers), and two organizations in St. Petersburg: “Maternity hospital No. 16” (25.3% of mothers) and in the perinatal center of the Russian Ministry of Health (27.5% of mothers). The number of newborns who left these hospitals and the number of births in these organizations of maternity care in 2019 were recorded.

The sample size corresponded to studies of an average accuracy with a confidence factor of 2 and a probability of 0.954. The representativeness of the samples was checked using the method of Professor A.M. Merkov, and the error in the study did not exceed 4% in the children's hospitals and 3.5% in the maternity organizations, which was acceptable. Mothers filled out a questionnaire on their own before being discharged from a medical organization.

In the survey of neonatologists, the general totality was 239 doctors who worked according to the official statistics in 2018 in the territory of St. Petersburg [11]. The sample size corresponded to studies of an average accuracy, with a confidence factor of 2, and a probability of 0.954. The representativeness of this sample was checked using the method of Professor A.M. Merkov, and the error in the study did not exceed 3%, which was acceptable.

Doctors-neonatologists independently filled out the questionnaire after passing the cycle of an advanced training and professional retraining of specialists at the Department of Neonatology with courses of neurology and obstetrics and gynecology of the Federal State Budgetary Educational Institution of the Ministry of Health of the Russian Federation, and during the meetings of the “School of Neonatologist” in St. Petersburg in 2018–2019.

Mathematical data processing was performed using the PASW STATISTICS software package. We calculated the relative values of the distribution of qualitative indicators, arithmetic mean values of quantitative indicators, and their standard errors. The relationships between the indicators were evaluated using the nonparametric Pearson χ^2 criterion.

Results and discussion

Among the mothers who participated in the survey, 56.6% of respondents belonged to the age group of 25–34 years (average age 30.83 ± 0.12 years). For most women, this was the first (51.4%) and the second (23.9%) child in the family (on average, there were 2.01 ± 0.08 children in the family). Most mothers were employees (32.2%) or workers (27.4%), and over half had a higher education (53.3%). In most cases, respondents rated their financial situation as average, and they had enough money for a normal life (51.2%) or below average when they only had enough money for minimal expenses (22.0%). An assessment of the marital status showed that 58.9% of women were in a registered marriage, 27.2% were in a civil marriage, and 13.9% were unmarried and divorced.

A leading characteristic of the quality of medical care is patient satisfaction with the attitude of the staff, which consists of several components. The first is an assessment of tact and goodwill of the medical staff. The second is an assessment of whether the staff pays a sufficient amount of time and attention to them.

According to 79.3% of mothers, the neonatologist was always friendly and tactful. They believed that he was sometimes tactless and rude, 19.6% of mothers thought that he was always tactless, and 1.1% felt that he was openly rude. The majority of mothers rated the human qualities of neonatologists

as “excellent” (68.8%), “good” 25.5%,” or “satisfactory” 5.7%. On average, mothers rated the human qualities of neonatologists at 4.63 ± 0.09 points.

Mutual relations between mothers and nurses were worse than those with doctors. Thus, while 79.3% of mothers noted the kindness and tact of doctors, only 53.3% of mothers noted the kindness and tact of nurses ($p < .05$), 46.7% of respondents encountered the tactless and rude attitude of nurses, and only 20.7% ($p < .05$) experienced the tactless and rude attitude of doctors. Naturally, the human qualities of the mother's nurses were rated lower than those of the doctors (3.91 ± 0.08 points vs. 4.63 ± 0.09 points; $p < .05$). They rated 32.1% as excellent, 33.2% as good, 32.1% as satisfactory, and 2.6% as unsatisfactory.

Thus, although the majority of mothers are fully satisfied with the attitude of neonatologists, one in five during their stay in the hospital faced rudeness and a tactless attitude of doctors and almost every second with a similar attitude of the medical staff.

Most mothers believed that the neonatologist gave their child enough time and attention (64.3%). 30.4% of women believed that sometimes they did not pay enough time and attention, and 5.3% of respondents said that the neonatologist always hurried and did not pay enough time and attention.

Mothers' assessments of the amount of time and attention that nurses gave to their children showed that 52.5% of respondents thought it was enough, 26.4% of mothers thought that sometimes the nursing staff did not pay enough time and attention, and 21.4% thought that the nurses were always in a hurry and did not pay enough time and attention.

Thus, the vast majority of mothers were satisfied with the attention and time provided by neonatologists to their children. In contrast, almost one in five were not satisfied with the attention and time given by nurses to the child.

The source of payment for medical care for 89.4% of mothers was a method of compulsory medical insurance. In 9.4%, it was a method of voluntary medical insurance, and in 1.2%, it was personal funds. The study examined the issue of paying for medical care from personal funds by respondents whose children received medical care at the expense of the mandatory medical insurance fund (free of charge). According to current legislation, patients must be familiar with the list of free medical services that they are entitled to receive under the state guarantees program. It was found that 61.2% of mothers read the list of free medical services, whereas 22.6% of respondents noted that it hung in a prominent place, but 38.8% of women did not read this list, and obviously, they were not interested in this issue.

In accordance with article 84 of the Federal Law “On Fundamental Healthcare Principles in the Russian Federation” and article 39 of the Law of the Russian Federation “On Fundamental Healthcare Principles in the Russian Federation,” citizens have the right to receive paid medical services provided at their request when providing medical care. The procedure and conditions for providing paid medical services to patients by medical organizations are established by a Government decree. Only 14.2% of mothers used the right to receive paid medical services, 97.3% of which were mothers whose children were in children's multi-specialty hospitals.

The assessment of mothers' satisfaction with the conditions of the newborn's stay in a medical organization revealed that 71.1% were fully satisfied, 21.1% were not completely satisfied, and 7.8% were not at all satisfied. The main reasons for those who were partially or completely dissatisfied were malevolent and inattentive attitudes on the part of medical staff (22.4%), unsatisfactory provision of childcare facilities (12.8%), and unsatisfactory material and technical equipment of the medical organization (12.5%), unregulated temperature regime (10.1%), and unsatisfactory sanitary and hygienic conditions (9.5%).

A survey of neonatologists showed that 95.3% of them were women. Neonatologists aged under 30 years—20.3%, 30–39 years—21.8%, 40–49 years—16.7%, 50–59 years—22.7%, 60 years and older—18.5% (the average age of doctors was 44.10 ± 0.13 years). Also, 83.6% of doctors worked in maternity organizations, and 16.4% worked in children's hospitals. Most doctors had work experience in the specialty “Neonatology” up to 10 years (32.6%) and 10–19 years (20.3%). The average work experience was 18.06 ± 0.11 years.

The doctor's working hours are orders for work and rest as established by the labor code that are stated in the employment contract. A rational model of work allows you to ensure high efficiency in combination with high and stable human working capacity without signs of excessive fatigue for a long time. However, an analysis of the workload during the working day of neonatologists showed that many work with an overload, and only 47.3% of respondents indicated that their working day corresponds to the schedule, whereas 52.7% often overwork. More than half (56.3%) said that they do not have enough time to rest. On the one hand, this is due to the high responsibility of doctors for the health of patients, but on the other hand, this is because of the irrational organization of work in the hospital and part-time work. Thus, only 62.2% of the doctors who participated in the survey worked for one rate or less, while 37.8% worked for more than a rate.

In general, doctors rated the system of the organization of medical care for newborns in which they work an average of 4.11 ± 0.10 points, whereas the majority gave good (52.1%) and excellent (31.6%) ratings. Only 16.3% of neonatologists gave satisfactory ratings, and no one rated the organization of newborn care as unsatisfactory.

The availability of medicine and medical products was the most highly appreciated individual components of the material-technical equipment of medical physicians (on average by 3.94 ± 0.09 points), and the availability of the medical organization for care of the patient was appreciated very low (on average of 3.59 ± 0.09 points). On average, respondents rated the equipment of a medical organization with the necessary equipment at 3.81 ± 0.10 points.

Neonatologists rated the organization of newborn care in St. Petersburg as a whole somewhat lower than the organization they worked for, on average, 3.78 ± 0.12 points ($p < .05$). At the same time, 2.3% considered it unsatisfactory, whereas 35.3% considered it satisfactory. Only 17.5% called the organization of newborn care in St. Petersburg excellent.

The main problems of organizing medical care for newborns in St. Petersburg, according to neonatologists, are related to unsatisfactory materials and technical bases (equipment) of medical organizations (28.8%), a shortage of medical and nursing personnel (23.5%), a low level of staff knowledge (17.4%), an imperfect routing of patients (12.9%), and the lack of best practices to guide the work of medical organizations that provide medical care to newborns (8.6%).

Conclusions

1. Most mothers are satisfied with the attitude of neonatologists (79.3%) and the attention and time they provide their children (64.3%). However, some doctors (20.7%) allow themselves to be rude and tactless toward their patients. The relationship between mothers and nurses is worse than with doctors, 46.7% of respondents experienced the tactless and rude attitude of nurses, 47.8% of mothers believe that the nurses did not pay enough time and attention to their children.

2. For the majority of mothers (89.4%), the source of payment for medical care was the funds of the compulsory medical insurance system. They rarely (14.2% of cases) used the right to receive paid medical services. Many (38.8%) were not interested in the list of free medical services provided under the compulsory medical insurance.

3. Although the majority of mothers (71.1%) were satisfied with the conditions of the newborn's stay in a medical organization, 28.9% were partial-

ly or completely dissatisfied. In most cases, it was because of the unkind and inattentive attitude on the part of medical staff (22.4%), inadequate provision of childcare facilities (12.8%), and unsatisfactory material and technical equipment of the medical organization (12.5%).

4. Many neonatologists often do not follow a rational work schedule; 52.7% of them are often overworked, and 56.3% believe that they do not have enough time for rest, which may be partly because of the irrational organization of work and their work in combination.

5. Neonatologists are quite critical of the organization of medical care for newborns in St. Petersburg; it is, on average, 3.78 ± 0.12 points. According to doctors, the main problems of the service are unsatisfactory materials and technical bases of medical organizations, a shortage of medical and nursing personnel, a low level of knowledge of medical personnel, and an imperfect routing of patients.

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