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## Assessment of Parents' Satisfaction with Quality of Nephrology Care for Children at the Regional Level (Social Research)

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### Keywords:

quality of medical care; satisfaction with medical care; nephrological pathology; sociological survey

### Abstract.

Assessment of the medical care quality involves determining the compliance of the medical care with established standards, expectations and needs of individual patients and populations, expectations and needs of certain patients and population groups.

**The objective** of the research was to analyze parents' satisfaction with the quality of specialized nephrological care for children in Chernivtsi region. Information-analytical and statistical methods were used in the research. The study of parents' satisfaction with the quality of specialized nephrological care for children with nephrological pathology showed that the majority of respondents (92%) were satisfied with the quality of the provided medical (nephrological) care in Chernivtsi region. The research will enable implementing reasoned management decisions regarding the improvement of the quality of specialized nephrological care for children, developing activities aimed at health gain and prevention of this pathology among the children's population at the regional level.



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**Problem statement and analysis of the recent research**

Assessment of medical care quality involves determining the compliance of the medical care with established standards, expectations and needs of individual patients and populations, expectations and needs of certain patients and population groups [4].

Nowadays, in the context of measures implementation to improve the quality of medical services, "patient's opinion" (in fact, opinion of "pediatric patient's" parents) may serve as one of the criteria for a comprehensive assessment of health care facility (HCF) activity in terms of the field reforming. The study of satisfaction with the medical care quality precisely shows the "positive" and "negative" points in the HCF activity, makes it possible to detect factors that reduce patients' "satisfaction" with medical care [1, 5, 6].

The objective of the research was to analyze parents' "satisfaction" with the quality of specialized nephrological care for children in Chernivtsi region.

**Materials and methods of the research**

Parents of the pediatric patients who underwent hospital treatment in the Nephrology Unit of the Chernivtsi City Children's Clinical Hospital (September - December 2015) were the object of the research. They gave voluntary informed consent to participate in research. Statistical material collection was performed by continuous method, namely by questioning the parents of children (patients) at their discharge according to a specially developed questionnaire "The study of parents' (relatives') opinion about the quality of nephrological medical services".

Nephrology Unit of the Chernivtsi City Children's Clinical Hospital serves as regional unit of Chernivtsi region (level III – providing specialized medical care to the population).

Assessment of parents' "satisfaction" was performed according to the rating scale with points from 1 to 5 where 5 points meant – completely satisfied, 4 points meant – rather satisfied than dissatisfied, 3 points meant – rather dissatisfied than satisfied, 2 points meant – completely dissatisfied, 1 point meant – it is difficult to say. "Satisfaction" coefficient was calculated to assess the general level of satisfaction with the quality and accessibility of nephrological care at the regional level [2, 3]:

$$C_s = \sum S_f / N_f \text{ where}$$

$C_s$  – satisfaction coefficient;  $\sum S_f$  – the total of mean values of satisfaction according to factors;  $N_f$  – the total number of factors;  $f$  – factor important to ensure the quality of medical services provided to the monitoring subject

The mean value of "satisfaction" according to the factor was calculated using the following formula: the maximum number of points in the rating scales

$$S_f = N_p / N_i \text{ where}$$

$S_f$  – the mean value of satisfaction according to a factor;  $N_p$  – the total number of points according to a factor;  $N_i$  – the total number of individuals interviewed according to a factor

The following formula was applied to calculate the values of "satisfaction" in percentage points:

$$C_{s(\%)} = (C_s / 5) \times 100\% \text{ where}$$

$C_{s(\%)}$  – satisfaction coefficient, %;  $C_s$  – satisfaction coefficient, points; 5 – the maximum number of points in the rating scales

Interpretation of satisfaction coefficient values is presented in Table 1.

Sociological, information-analytical and statistical methods were used in the research.

Table 1

## Interpretation of coefficient values

No	Coefficient value, %	Interpretation of coefficient values
1.	≥ 90	Excellent
2.	85 – 89	Very good
3.	80 – 84	Good
4.	75 – 79	Satisfactory
5.	70 – 74	Gives rise to concern
6.	65 – 69	Bad
7.	≤ 64	Very bad

**Results of the research and their discussion**

The total number of the surveyed parents constituted 100 people including 93% of the female sex and 7% of the male sex. According to the age of the surveyed, parents under 20 constituted 5%, parents at the age of 20 to 29 comprised 20%, parents at the age of 30 to 39 amounted 41%, parents at the age of 40 to 49 constituted 25%, parents at the age of 50 to 59 comprised 6%, parents at the age of 60 and older amounted 3%. According to the administrative-territorial division, respondents' families were the residents of Chernivtsi (regional centre) in 30% of cases, residents of cities (regional authority) and urban-type settlements (UTS) in 17% of cases, and residents of rural areas in 53% of cases. According to the employment among population groups, 7% of respondents studied at the time of the survey, 57% of respondents were working people, 31% of respondents did not work temporarily, 5% of respondents were pensioners.

In order to analyze parents' satisfaction with the quality of specialized nephrological care for children in Chernivtsi region questionnaire items were "grouped" into two main "blocks".

According to the results of the research, coefficients of parents' "satisfaction" with the factors "affecting" the quality of nephrological care for children were calculated (Table 2). Analysis of the coefficients values may indicate rather high level of parents' "satisfaction" with quality and the level of specialized nephrological care for children's population in Chernivtsi region, respectively. However, rather low level of "satisfaction" with the quality of nephrological care at the outpatient treatment stage (outpatient department, outpatient clinic according to the place of residence) was detected in the residents of Chernivtsi and towns under regional jurisdiction of Chernivtsi region ( $(C_s(\%)) = 79.2\%$  – "satisfactory value" (refer to Table 1)).

In order to detect medical and organizational factors that can affect satisfaction with the quality of nephrological care, the survey results were subjected to correlation analysis and presented as correlation Pleiades in the formation of which direct relations and inverse relationships with the correlation level  $r \geq \pm 0.3$  were taken into account.

Correlation relationship between parents' satisfaction and two groups of factors was detected: the first group concerned organizations and the quality of nephrological care in HCF of Chernivtsi region (outpatient and inpatient care) according to the respondents' place of residence, the second group concerned organizations and the quality of nephrological care in Chernivtsi region. Satisfaction with the quality of nephrological care for children in Chernivtsi region HCF ( $r = 0.556$ ) among the respondents largely depended on its "quality" at the outpatient stage of treatment ( $r = 0.616$ ).

Decrease in intensity of "satisfaction" correlation in relation to the quality of in-patient care according to the respondents' place of residence ( $r = 0.458$ ) can be explained by the percentage of the surveyed parents (53%) living in rural areas and by the fact that medical (nephrological) care is provided at the primary level (outpatient clinic).

Table 2

Coefficient of parents' "satisfaction" with quality and the level of specialized nephrological care for children's population in Chernivtsi region

Adminis-trative territorial division of respon-dents	Coefficient of "satisfaction"		Please, evaluate general quality of nephrological care for your child in health care facilities in Chernivtsi region	Please, evaluate general quality of nephrological care for your child at the outpatient treatment stage (outpatient department, outpatient clinic) according to the place of residence	Please, evaluate general quality of nephrological care for your child at the in-patient facility	Please, evaluate general quality of nephrological care for children where your child is treated now	Please, evaluate the importance of the information which should be provided to you during the in-patient treatment and satisfaction with it			
	Information about your child's disease	Information about the treatment, its benefits, possible complications, consequences					Information on the procedures, operations, examinations, medication, their benefits, possible side effects, how to behave during their intake	Please, evaluate the importance of the way the inpatient treatment (waiting for doctor's consultation, procedures) is organized and satisfaction with it		
Residents of Chernivtsi and towns under regional jurisdiction in Chernivtsi region	$C_{q(%)}$	$(C_s / 5) \times 100\%$	98.5%	79.2%	98.2%	100%	98.6%	98.6%	95.7%	95.0%
Residents of rural-type settlements in Chernivtsi region			88.7%	86.5%	96.3%	95.7%	95.8%	94.3%	96.0%	96.0%
Residents of Chernivtsi and towns under regional jurisdiction in Chernivtsi region	$S_f = N_p / N_r$		91.9%			100%	98.0%			95.0%
Residents of rural-type settlements in Chernivtsi region			90.5%				95.7%	95.0%		
Residents of Chernivtsi and towns under regional jurisdiction in Chernivtsi region	$C_s = \sum S_f / N_r$		95.0%							
Residents of rural-type settlements in Chernivtsi region			94.0%							

Note. "Rating scale" of respondents' answers, where 5 points meant – completely satisfied, 4 points meant – rather satisfied than dissatisfied, 3 points meant – rather dissatisfied than satisfied, 2 points meant – completely dissatisfied, 1 point meant – it is difficult to say.

Parents' "satisfaction" with nephrological care for children at the regional level is influenced by organization and quality of specialized nephrological care (the Nephrology Unit of the Chernivtsi City Children's Clinical Hospital) in Chernivtsi region ( $r = 0.589$ ), and "information support" of

patient's parents while providing specialized nephrological care ( $r = 0.57-0.635$ ).

Detected correlation relationships between quality of nephrological care in HCF of Chernivtsi region and the factors at the stage of specialized nephrological care ( $r = 0.546-0.565-0.67-0.712$ ) in aggregate affecting parents' "satisfaction" with nephrological care for children at the regional level are "of interest".

### **Conclusions**

The study of parents' "satisfaction" with medical care for children with nephrological pathology showed that majority of the respondents were satisfied with the quality of medical (nephrological) care in Chernivtsi region. The general level of satisfaction (92%) was significantly influenced by "satisfaction" with the organization and the quality of providing specialized nephrological care at the regional level (98%) ( $C_s = 95\%$  in the city residents and  $C_s = 94\%$  in the rural population of Chernivtsi region). The survey of sick children's parents as direct consumers of health services provides an opportunity not only to identify the factors of population's dissatisfaction with quality and organization of medical care, but is also a "significant factor" which should be considered when taking management decisions concerning the improvement in the quality of medical services in medical and preventive treatment facilities, particularly at the outpatient stage of nephrological care (outpatient department, outpatient clinic) in Chernivtsi and towns under regional jurisdiction of Chernivtsi region.

**Prospects for further research** involve consideration of the sociological research results in the development and implementation of medical and technical documents, namely joint agreed local protocols of medical care for children with nephrological pathologies, in health care facilities in Chernivtsi region in order to "unify" the standards and to improve the quality of medical (nephrological) care at the regional level.

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