

# Evaluations related to the quality of health and nursing care of patients after abdominal surgery

## Pacientų po pilvo operacijų sveikatos priežiūros ir slaugos kokybės vertinimai

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### Background / objective

Evaluations of the health care quality of patients after abdominal operations are significant for the improvement of health care quality in all hospitals. However, there are a lot of discussions how to evaluate the patient's opinion and attitudes. The aim of the present study was to analyze patients' evaluations of the quality of abdominal surgical nursing care.

### Methods

A multicenter, cross-sectional, analytical study was performed. The study was conducted in 11 abdominal surgical wards at Lithuanian hospitals. The data were collected in June 2007 and January 2008. Patients (n = 1208) after abdominal operations participated in the study. A GNCS-P with the response rates of 74 % was used. The data were analyzed statistically.

### Results

The co-operation with significant others and the progress of the nursing and health care process were evaluated lowest by patients. The patient age and satisfaction were the factors related to the quality of nursing care.

### Conclusions

The abdominal surgical nursing and health care is a specific surgical area in which different patients are involved; however, all of them expect the good quality of health care before, during, and after abdominal surgery. The process of nursing care in abdominal surgery is specific because of the limited time of patient hospitalization, usually multiple patients' diagnosis, as well as multiple contacts and relationships with many different staff. Surgical patient participation in the process of health care should be based on the effective relationship and co-operation among patients, medical specialists, and significant others, which is necessary and imperative for increasing the quality of abdominal surgical nursing care.

**Key words:** health and the quality of nursing care, surgical health care, abdominal surgery, patient evaluations.

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### Įvadas / tikslas

Pacientų po pilvo operacijų sveikatos priežiūros kokybės vertinimai yra reikšmingi siekiant gerinti ligoninės paslaugų kokybę. Tačiau daug diskutuojama, kaip būtų galima vertinti pacientų nuomonę ir požiūrį į kokybę. Tyrimo tikslas – išanalizuoti pacientų sveikatos priežiūros ir slaugos kokybės vertinimus.

## Metodai

Tyrimui atlikti buvo pasirinktas daugiacentris aprašomasis tyrimo metodas. Pacientų apklausa vyko 2007 m. birželio–2008 m. sausio mėn. septynių Lietuvos ligoninių 11-oje pilvo chirurgijos skyrių. Pacientai (n=1208), kuriems atlikta pilvo operacija, apklausti paskutinę hospitalizacijos dieną. Klausymynų grįžtamumas 74 proc. Atlikta statistinė duomenų analizė.

## Rezultatai

Bendradarbiavimą su paciento artimaisiais ir sveikatos priežiūros pažangą pacientai įvertino blogiausiai. Pacientų amžius ir pasitenkinimas sveikatos priežiūra turėjo koreliacinį ryšį su sveikatos priežiūros kokybe.

## Išvados

Pacientų po pilvo operacijų sveikatos priežiūra ir slauga yra specifinė chirurgijos sritis. Visi jie tikisi gauti kokybiškas paslaugas prieš operaciją, jos metu ir po jos. Slaugos procesas pilvo chirurgijoje yra savitas ir todėl, kad pacientų hospitalizacijos laikas yra ribotas, jie dažnai serga gretutinėmis ligomis, turi daug kontaktų ir santykių su personalu. Pacientų dalyvavimas sveikatos priežiūros procese turi būti grindžiamas efektyviais jų santykiais ir bendradarbiavimu su medikais ir savo artimaisiais, nes nuo to priklauso paslaugos kokybės tobulinimas.

**Reikšminiai žodžiai:** sveikatos priežiūros ir slaugos kokybė, chirurginė sveikatos priežiūra, pilvo operacija, pacientų vertinimai

## Introduction

The number of patients in need of abdominal surgery has been increasing around the world [1]. A large part of the population needs abdominal surgical nursing care, and they are believed to expect a quality health care in hospitals. Quality improvement in health care is the topic requiring special attention from all stakeholders throughout all countries [2].

The quality of surgical health care may have different meanings for different people because of their different understanding of the professional standards of practice, patient satisfaction, patient characteristics [3, 4] and even a subjective opinion. The quality of nursing care can also be defined differently because of different patient group definitions, dimensions, and priority among the attributes [5]. The conceptual framework for the study derives from the model of the quality of nursing care developed by Leino-Kilpi [6]. The quality of nursing care is defined as a set of elements of human-oriented and task-oriented activities, staff characteristics, environment, the preconditions and progress of nursing care, and co-operation with significant others [6].

Generally, patients tend to a high evaluation of the quality of nursing care [7, 8]. Patients' evaluations of the quality of nursing care have been assessed on the basis of patient satisfaction as a major indicator of the quality [9, 10]. There is a consensus on patient satisfaction being an important outcome that must be evaluated and measured [10], but patient satisfaction cannot be the main indicator of the quality of surgical nursing care. Patients

describe quality in terms of the interpersonal aspects of care, how well they were treated, and the response of the provider to their needs [11].

Some patient-related factors may have a connection with the evaluations of the quality of nursing and health care. The demographical factors, such as education, gender, age [12], the time of hospitalization, type of surgery [13]; the work-related factors, including staffing mix, time, workload, skill mix, nurse staffing such as the number of nurses [14], may have an impact on the evaluations of quality. The hospital and ward characteristics have an impact on the quality of nursing care [15]. The environment has been a significant element of the quality of nursing care from the patients' viewpoint [5, 7].

The purpose of this study was to analyze patients' evaluations of the quality of abdominal surgical nursing and health care in order to gain knowledge for improving the quality of health care in practice.

## Patients and methods

A multicenter cross-sectional analytical study was conducted.

Nine Lithuanian hospitals in which abdominal surgeries are performing were included in the study. In one of the hospitals, a pilot study was done. The director of another one of the 9 hospitals did not give the permission for data collection by informing that this was allowed only for their own researches and students. Data were collected from 11 abdominal surgery units of 7 hospitals.

The patients (n = 2106) were invited to participate in the survey. The data were collected from patients after operation during their last day of hospitalization between June 2007 and January 2008. The inclusion criteria were: age 18 years or more, the ability to read, write and speak Lithuanian, and having undergone elective or emergent abdominal surgery [16]. The final data (n = 1208) were included in the study. The response rate was 74%.

The Good Nursing Care Scale for Patients (GNCS-P, 6), modified for the Lithuanian context, with seven main categories was used: staff characteristics (14 items); task-oriented activities (11 items); human-oriented activities (7 items structured from four subcategories); preconditions (8 items); progress of the nursing process (10 items); the environment (2 items); cooperation with significant others (12 items) [6]. The scale was devel-

oped in Finland and has been widely used nationally in Finland (e.g., 13, 17) and in other countries [7, 18].

Permissions to make a survey were received from all heads of hospitals and from the Lithuanian Bioethics Committee (contract number 13; 24 March 2006). The permission to use the instruments was received from the author (Leino-Kilpi, 15 June 2005).

The data were analyzed statistically by using the Statistical Package for Social Sciences for Windows (SPSS, version 21; SPSS Inc., Chicago, IL, USA). Descriptive analyses (mean, standard deviation, range and frequency tables) were made to understand the background variables of the respondents. The differences between the patients and the nurses were tested by the Mann–Whitney *U*-test. Associations among the variables were calculated using the Spearman correlations. The significance level was set at  $p < 0.05$ .

**Table 1.** Characteristics of patients (n = 1208)

	n	%		n	%
<b>Gender</b>			<b>General satisfaction with the health care system in Lithuania</b>		
Male	488	40	Yes	604	50
Female	720	60	No	600	50
<b>Education</b>			<b>Satisfaction with attendance and health care in this hospital</b>		
Secondary school	394	33	Yes	1114	92
Post-secondary/vocational school	305	26	No	93	8
College	276	23			
University	204	17			
Other	17	1			
<b>Place of residence</b>			<b>Satisfaction with medical treatment during the current hospitalization</b>		
City	747	62	Yes	1130	94
Town	330	27	No	76	6
Village	131	11			
<b>Marital status</b>			<b>Satisfaction with nursing care during the current hospitalization</b>		
Single	344	29	Yes	1123	93
Not single	860	71	No	84	7
<b>Type of current surgery</b>			<b>Having the relatives / significant others</b>		
Laparoscopy	446	40	Yes	1144	95
Laparotomy	560	50	No	61	5
I don't know	114	10			
<b>Type of anesthesia</b>			<b>Preferring to involve significant others in the health care</b>		
Intubation	758	69	Yes	884	74
Spinal anesthesia	141	13	No	314	26
Local anesthesia	71	6			
I don't know	135	12			
<b>Type of current hospitalization</b>			<b>Significant others prefer to participate in the health care</b>		
Elective	714	59	Yes	925	78
Emergency	489	41	No	259	22

## Results

### *Background characteristics*

The gender of the patients divided nearly equally (Table 1). The mean age was 47 (range, 18–91). The majority of the patients had relatives, 74% of them approved the idea of involving significant others in their nursing care process, but only 63% mentioned that relatives had participated in their health care.

### *Patients' evaluations of the quality of abdominal surgical nursing and health care*

Patients' evaluations of the quality of abdominal surgical nursing and health care were positive. The High assessments were given to the staff characteristics (mean, 5.44; range, 1–6) and the environment (mean, 5.36; range, 1–6) of the hospitals. The patients gave lower

### *Factors related to the patients' evaluation of the quality of abdominal surgical nursing and health care*

Several factors mentioned by the patients and nurses were associated with their evaluation of the quality of nursing care (Table 3). Some background factors, such as age, general satisfaction with the health care in Lithuania, satisfaction with attendance and health care in the current hospital, satisfaction with medical treatment and nursing care during the current hospitalisation were particularly associated with the perception of the nursing care quality. A statistically significant but low ( $r = 0.102-0.286$ ,  $p < 0.01$ ) correlation was established between the quality of co-operation with significant others and several variables of patients and nurses. No differences were found in the perceptions of males and females.

**Table 2.** Patients' evaluations of quality of the nursing care by quality categories

Categories	n	Mean	MD	SD	Q1	Q3	min	max	Cronbach's alpha
<b>Staff characteristics</b>									
- Patients	1063	<b>5.44</b>	5.83	0.75	5.00	6.00	1.00	6.00	0.958
<b>Task-oriented activities</b>									
- Patients	1062	4.88	5.18	1.13	4.18	5.91	1.00	6.00	0.935
<b>Human-oriented activities</b>									
- Patients	1002	5.12	5.50	1.02	4.50	6.00	1.00	6.00	0.929
<b>Preconditions</b>									
- Patients	1059	5.15	5.50	0.954	4.57	6.00	1.00	6.00	0.937
<b>Progress of nursing process</b>									
- Patients	969	<b>4.45</b>	4.50	0.99	3.80	5.20	1.00	6.00	0.817
<b>Environment</b>									
- Patients	1056	<b>5.36</b>	6.00	0.97	5.00	6.00	1.00	6.00	0.707
<b>Cooperation with significant others</b>									
- Patients	679	<b>4.55</b>	4.83	1.36	3.67	5.92	1.00	6.00	0.965

assessments to the quality of the progress of the nursing and the health care process (mean, 4.45; range, 1–6) and to the co-operation with significant others (mean, 4.55; range, 1–6) (Table 2).

## Discussion

### *Validity and reliability*

The adequacy of the study process was examined by assessing the validity and reliability of the results. The

**Table 3.** Correlation between the quality of nursing care and the background factors of the patients (n = 1208) (Spearman's rho)

	<b>Patients' perceptions N = 1208</b>
<b>Background factors</b>	<b>Quality</b>
<i>Demographic factors</i>	
Age	.163**
Level of education	–
Courses for professional development	–
Type of licence	–
<i>Satisfaction factors</i>	
Satisfaction with health care	.356**
Satisfaction with medical treatment	.336**
Satisfaction with nursing care	.379**
Work satisfaction	–

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

content validity and the construct validity were assessed [16]. The scale had been created for Finnish patients [6]; the procedure of testing the cultural equivalence in the Lithuanian context was conducted [16, 19]. The scale's construct validity was tested by the principal component analysis (PCA) after gathering the main data. In the majority of cases, the component contents corresponded to those of the original categories. The model's percentage of variance (PCT) for the patient categories was 64%. The common structure of the instrument was validated.

### ***Comparison with other studies***

The patients' evaluations of the quality of health care are important, because they are health care customers and main evaluators, but patients' evaluations may mostly reflect the satisfaction with health care in concordance with their expectations and needs. Lithuanian patients evaluated the quality of nursing care quite high, similarly to other studies [7, 8, 20]. But, differently from our study, Bankauskaite et al. [21] stated that the staff characteristics received the lowest assessments from the Lithuanian patients. The patients accepted the positive personal qualities of the health care providers, as well as

the appropriate social and physical environment [8] as components of the quality of nursing and health care.

The adequate environment contributes to patients' higher evaluation of the quality of nursing. The significant others were hardly involved in the process of health care of surgical patients in the hospital, and they did not receive any instructions on how to help the patient at home. However, it is economically important to involve significant others into nursing care with a goal to reduce the expenses on the nursing staff taking care of patients at home.

A correlation between the patient's demographic characteristics and perception of quality was found only depending on age and satisfaction as the major indicator of quality in the evaluation process. Senior patients evaluated the quality of nursing care higher than did the younger ones [22], probably because of their more frequent contacts with the health care system due to chronic diseases or lower expectations of the health care quality. More satisfied patients were more positive in their evaluations.

### **Conclusions**

The abdominal surgical nursing care is a specific surgical area in which different patients are involved; however, all of them expect a good quality of nursing care before, during, and after abdominal surgery. The process of nursing care in abdominal surgery is specific because of the limited time of hospitalization, usually multiple diagnosis, as well as multiple contacts and relationships with many different staff. Surgical patient participation in the process of health care should be based on the effective relationship and co-operation among patients, medical specialists, and significant others, which is necessary and imperative for increasing the quality of abdominal surgical nursing care. The nursing care process should be given special attention in the abdominal surgical units and organized in accordance with patients' needs and nurses' effective work organization, given human and financial resources of hospitals. The further research should be focused on the specific activities of significant others and developing a collaboration among health care providers, patients, and significant others.

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