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Impact of Organisational and Legal Changes in the Healthcare System in Poland on Satisfaction of Patients of the Regional Multi-Specialist Center for Oncology and Traumatology of the Nicolaus Copernicus Memorial Hospital in Lodz on the Basis of Selected Elements of Healthcare

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Abstract

Introduction: *In 2017, an amendment to the Act on Healthcare Services Financed from Public Funds of 23 March 2017 introduced a system of basic hospital provision of healthcare services, the so-called 'hospital network'.*

Aims: *The main aim of the study was to find out the impact of organisational and legal changes to the healthcare system in Poland in the form of an amendment to the Act on Healthcare Services Financed from Public Funds of 23 March 2017 on patient satisfaction with selected elements of healthcare.*

Material and methods: *The study was conducted in two stages: before and after the introduction of the amendment. The study covered 847 patients in stage I and 723 patients in stage II in several randomly selected wards of the Regional Multi-Specialist Center for Oncology and Traumatology of the Nicolaus Copernicus Memorial Hospital in Lodz. Descriptive and inferential statistics were used in the data analysis.*

Results: *The majority of the surveyed patients had no opinion on the impact of the amended Act on the quality of provided services. Similar results were obtained when analysing the patients' assessment of reduction of queues to a specialist doctor. A large group of respondents claimed that the amendment to the Act would not reduce queues for hospital treatment. While assessing the current healthcare system, both before and after the amendment to the Act, patients most often gave a rating of 4 (45.2% and 47.2%), while about one third of patients gave a rating of 3 (30.8% and 33.7%). Patients gave the highest rating for the performance of doctors as well as of nursing and auxiliary staff.*

Conclusions: *Introduction of the amendment to the Act on Healthcare Services Financed from Public Funds has not affected the overall level of patient satisfaction with healthcare.*

Key words: *patients, quality of care, healthcare, patient satisfaction, healthcare system*

Introduction

The changing economic, social and cultural situation in Poland has changed the perception of customers by service providers. A satisfied customer has become a basis for functioning of enterprises, including healthcare institutions. The patient/customer has become aware of his/her rights, more demanding, expecting the highest possible standard for products and services [1, 2].

The aim of this study was to determine the impact of the amendment to the Act on Healthcare Services Financed from Public Funds on patient satisfaction with healthcare with consideration given to challenges that result from an increasing importance of analyses on patient satisfaction in healthcare quality management.

In the Polish healthcare system, the first hospital network was established under the Act of 28 October 1948 on Social Health Care Units and Planned Economy in Health Service. In accordance with its provisions, which took the medical profile and geographic coverage into account, district, voivodship and clinical hospitals were distinguished. They were healthcare institutions maintained by the state budget. Article 15 of the abovementioned Act explicitly used the term 'network', which defined the plan for distribution of health establishments. Their financing scheme was based on the economic plan for healthcare services [3].

The first attempt to introduce a network of hospitals after the system transformation was made in 1997. It was assumed that the national hospital network would function after restructuring of the healthcare sector. The changes were supposed to involve limitation of discretionary management of inpatient care resources, creation of a network of hospitals that would meet actual demand for medical services, particularly an increase in the number of long-term care and nursing care beds. The fundamental aim of this network of hospitals was to create right prerequisites for reasonable management of financial resources that were incurred in the operation of inpatient care, as well as more efficient use of already existing resources [4].

The hospital network project was included in the amendment to the Act of 6 February 1997 on National Health Insurance. On the basis of this

amendment, the Minister of Health was given powers to define the national network of hospital and wards. Their reference level was to be determined depending on the type of health services provided in the individual hospitals.

The Act, known as the Hospital Network Act, implemented a new legal system providing access to basic hospital healthcare services, called the 'security system'. It constitutes the basic form of securing access to all healthcare services within hospital treatment [5]. The hospital security system introduced by the Act should ensure correlated access to healthcare services within hospital treatment, access to highly specialised services, as well as outpatient specialised care which will be provided in hospital outpatient clinics, within drug programmes, therapeutic rehabilitation, drugs in chemotherapy, and after-hours healthcare provision.

Finally, in 2017, work on the amendment to the Act on Healthcare Services Financed from Public Funds came to an end and by virtue of the amendment, a system of secured access to all basic healthcare services within hospital treatment, the so-called 'hospital network', was introduced in Poland. The Act introduced six levels of basic healthcare services provided within hospital treatment [6]:

- first-level hospitals,
- second-level hospitals,
- third-level hospitals,
- oncological and pulmonology hospitals,
- paediatric hospitals,
- national hospitals,
- centres providing medical services.

System solution of the 'hospital network' clearly defines the scope of state regulation and domain and subject areas, as well as the range of health services that are provided on the basis of competitive bids [7].

From the point of view of availability of health services to patients as well as functioning of universal health coverage, the so-called 'hospital network' represents the biggest and most profound change to this system, as it fundamentally changes the systemic, central as well as local decisive bodies that

are responsible for establishing contracts and subsequent financial settlements of contracted health services.

In 2017, 594 healthcare facilities were included into the hospital network, comprising 516 public hospitals which have 145,000 beds. 355 hospitals (16 public healthcare facilities) were excluded from the network. First-level hospitals included 283 establishments. Second-level hospitals, which provide more complex services, included 96 establishments, and the third-level multi-profile specialist hospitals included 96 and 62 establishments, respectively. Besides the hospital network includes 20 oncology, 13 paediatric and 30 pulmonology hospitals as well as 90 national facilities (healthcare institutes and university teaching hospitals) [8].

The regulator assumed that the system of providing access to basic hospital healthcare services, introduced by the Act should ensure correlated access to services within hospital treatment, highly specialised services, as well as outpatient specialised care which will be provided in hospital outpatient clinics, within drug programmes, therapeutic rehabilitation, drugs in chemotherapy, and after-hours healthcare provision.

A change in patients' expectations is increasingly evident in medical services. The level of satisfaction with received healthcare services depends on how efficiently the patient's expectations have been met [9, 10, 11]. The level of satisfaction of medical staff performance is closely related to the quality of the provided services, and thus increases patient safety and their level of satisfaction with healthcare.

While examining and analysing patient satisfaction regarding the quality of medical services, it is important to define the concept of patient satisfaction and what is important to the patient in medical care [12, 13, 14, 15]. According to the definition adopted by the American Nurses Association, patient satisfaction is closely related to the patient's or their family's opinion on the provided care [16]. Gaweł et al. define patient satisfaction as "complete satisfaction of needs or desires" [17]. Pascoe views the concept as a comparative process that involves the patient's cognitive sphere and their emotional response to important aspects of their experience that relate to the structure, process and effect of care [18]. A review of the cited

definitions allows us to conclude that patient satisfaction is the resultant of patients' expectations regarding the quality of care they receive and their personal experience [19, 20].

Aim

The main aim of the study was to find out the impact of organisational and legal changes to the healthcare system in Poland in the form of an amendment to the Act on Healthcare Services Financed from Public Funds of 23 March 2017 on patient satisfaction with selected elements of healthcare.

Material and methods

The Regional Multi-Specialist Center for Oncology and Traumatology of the Nicolaus Copernicus Memorial Hospital in Lodz is one of 8 hospitals in Poland with the largest budget. After the Act on Healthcare Services Financed from Public Funds became effective, the hospital was qualified to the basic level of health protection as a third-level hospital. It has 33 wards (873 beds), 43 specialist clinics and a modern diagnostic department. In 2017, more than 80,000 patients were hospitalised and above 12,000 operations were performed. The hospital employs more than 2,200 people.

The survey was carried out in two stages. The first stage of the study was conducted in the period from 15 May to 30 June 2017, i.e. before the introduction of the amendment to the Act on Healthcare Services Financed from Public Funds, whereas its second stage was conducted between 1 and 30 April 2018, i.e. six months after the introduction of the amendment to the above Act.

In the first and second stages, the study included all hospitalised patients in 7 randomly selected wards of the Regional Multi-Specialist Center for Oncology and Traumatology of the Nicolaus Copernicus Memorial Hospital in Lodz. Two anonymous questionnaires were used to collect empirical material, intended to be filled in by the respondents themselves.

A questionnaire consisting of 58 questions was used to assess patient satisfaction. The questionnaire was prepared on the basis of a questionnaire used to survey patient satisfaction with medical care in other medical centres [21]. The questions included into five thematic domains:

- → domain 1 – impact of the amended Act on the functioning of the healthcare system,
- → domain 2 – assessment of doctors' performance,
- → domain 3 – assessment of performance of nursing and auxiliary staff,
- → domain 4 – assessment of the organisation of staff performance and the information given to the patient,
- → domain 5 – assessment of housing and catering conditions.

The questionnaire also included questions about socio-demographic data and questions about patients' social and living conditions. Patients were given the questionnaire upon admission to the ward and they were requested to complete and return it on the day of discharge from hospital. At the end of hospitalisation, patients dropped the completed questionnaires into special boxes placed in each of the wards included in the study.

During the first stage of the study, a total of 1172 patients were hospitalised in the selected wards during the analysed period. The completed questionnaires were handed in by 847 respondents, which accounted for 72.3% of the hospitalised patients. In contrast, in the second stage of the survey, in the analysed period, a total of 907 patients were hospitalised in the selected wards. Completed questionnaires were returned by 723 respondents, which accounted for 79.7% of the hospitalised patients.

Data from all questionnaires collected during the study period were entered into a Microsoft Excel spreadsheet. Once the database was created, a random check of 5% of records was carried out to confirm that the entered data are complete and meet quality standards.

Descriptive methods and statistical inference methods were used to process the collected data. In the process of statistical processing of the collected empirical material, the author calculated the range (minimum-maximum) of quantitative characteristics, their average values (arithmetic means and medians) and measures of internal variation (standard deviations).

The multivariate analysis of variance (ANOVA) was used for a statistical analysis of collected empirical material. The structure of the groups according to the analysed variables was described using structure indices (%). The $\chi 2$ test was used to examine a relationship between the analysed variables. Due to the size of the groups in individual analyses, the test with Yates' correction was appropriately modified, p=0.05 was adopted as statistically significant. A statistical analysis was carried out using the Statistica 10.0 programme.

The Director of the Regional Multi-Specialist Center for Oncology and Traumatology of the Nicolaus Copernicus Memorial Hospital in Lodz gave his consent for the study to be conducted. The study also received a positive assessment from the Bioethics Committee of the Medical University of Lodz – resolution no. NRR/216/17/KE.

Results

Patient characteristics

Among the patients surveyed in both the stages, women outnumbered men (60.8% vs 39.2% in stage I and 63.8% vs 36.2% in stage II) (p>0.05).

In stage II of the study, the proportion of residents of large cities decreased (from 51.5% to 35.3%), while the proportion of rural residents increased (from 15.6% to 28.7%) (p>0.05).

In both stages of the study, the age structure of the respondents did not differ statistically significantly – people aged 60–69 years prevailed (34.4% in stage I and 31.8% in stage II), while the second largest group was made up of respondents aged 50–59 years (20.3% and 23%, respectively) (p>0.05).

Besides, in both stages, married patients made up a vast majority of respondents (58.9% in stage I and 59.4% in stage II) (p>0.05).

Half of the patients in both stages of the study had secondary education. 25.5% of patients in stage I and 22.3% of patients in stage II had elementary education, whereas university education was confirmed by 23.3% and 27.6% of the respondents, respectively (p>0.05).

In the survey conducted before the amendment to the Act, the group of pensioners (43.8%) outnumbered the group of persons employed within an employment contract (39.4%), while in the survey conducted after the amendment to the Act, patients employed on the basis of an employment contract (46%) made up the largest group, whereas pensioners made up the second largest group (36.7%) (p=0.42).

Approximately 45% of the patients surveyed in both stages of the study described their housing conditions as good, while about one-third claimed the conditions are average (35.8% and 33.4%, respectively) (p>0.05).

The largest group of surveyed patients in both stages of the study were those living in multi-family buildings (61.2% and 57.0%, respectively), while 37.2% of patients surveyed before the amendment and 41.7% surveyed after the amendment declared they lived in houses (p>0.05).

Correspondingly, 36.5% and 38.9% were hospitalised for the first time, while 37.8% and 34.7% were in hospital for the third or subsequent time (p>0.05).

When asked why they had chosen this hospital, the largest group of patients, representing 59.3% before the amendment and 61.3% after the amendment declared that they wanted to be treated in this hospital. For slightly more than 20% of the respondents (22.8% and 20.8%, respectively), the convenient location was the reason for their hospitalisation in a particular place, while 17.9% of respondents in both stages of the survey declared that they had no other choice (p>0.05).

In response to the question on the mode of admission to hospital, referral letters from a doctor predominated (66.6% and 73.2%, respectively). 17.9% of patients surveyed before the amendment and 14.9% after the amendment were brought to hospital by ambulance, while 15.5% before the amendment and 11.9% after the amendment presented to hospital themselves (p>0.05) (Table 1).

Table 1. Characteristics of patients before and after the amendment to the Act

Variable	Patients			
	Before the amendment to the Act		After the amendment to the Act	
Age	N	%	N	%
<30	42	5.45%	37	5.97%
30–39	68	8.83%	65	10.48%
40–49	108	14.03%	97	15.65%
50–59	156	20.26%	143	23.06%
60–69	265	34.42%	197	31.77%
70–79	98	12.73%	65	10.48%
>=80	33	4.29%	16	2.58%
Gender	**N**	**%**	**N**	**%**
Female	515	60.80%	439	63.81%
Male	332	39.20%	249	36.19%
Place of residence	**N**	**%**	**N**	**%**
Village	132	15.57%	184	28.71%
Small town	125	14.74%	98	15.29%
Medium-sized town	154	18.16%	133	20.75%
Big city	437	51.53%	226	35.26%
Marital status	**N**	**%**	**N**	**%**
Single	94	11.30%	84	11.91%
Married	490	58.89%	419	59.43%
Divorced	117	14.06%	89	12.62%
Widowed	131	15.75%	113	16.03%
Education	**N**	**%**	**N**	**%**
Elementary/vocational	213	25.48%	158	22.35%
Secondary	420	50.24%	354	50.07%
University	203	24.28%	195	27.58%
Type of employment	**N**	**%**	**N**	**%**
Unemployed	47	5.70%	35	4.99%
Temporary employment	46	5.58%	48	6.84%
Permanent employment	325	39.39%	323	46.01%
Farmer	36	4.36%	25	3.56%
Pensioner	361	43.76%	258	36.75%
Student	10	1.21%	13	1.85%
Living conditions	**N**	**%**	**N**	**%**
Very poor	5	0.60%	9	1.27%
Poor	26	3.11%	16	2.25%
Average	299	35.77%	237	33.38%

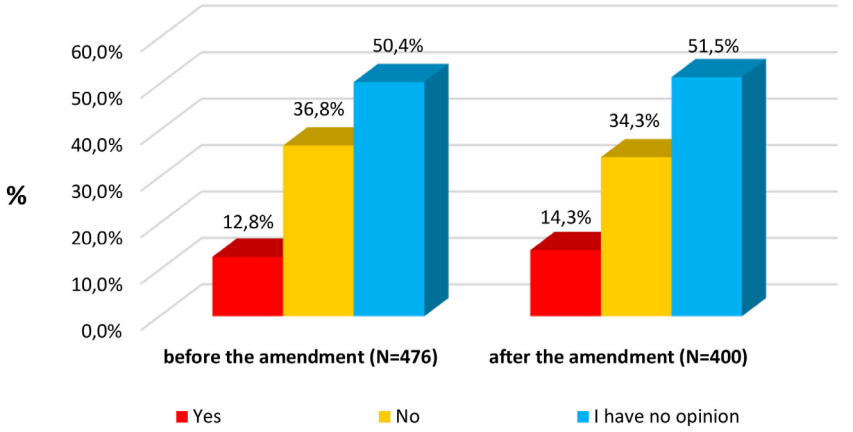
Good	380	45.45%	326	45.92%
Very good	126	15.07%	122	17.18%
Housing conditions	**N**	**%**	**N**	**%**
Lack of flat	13	1.57%	9	1.27%
Multi-family building	507	61.23%	405	57.04%
House	308	37.20%	296	41.69%
Number of hospitalisations	**N**	**%**	**N**	**%**
First hospitalisation	307	36.46%	279	38.91%
Second hospitalisation	216	25.65%	189	26.36%
Third and subsequent hospitalisations	319	37.89%	249	34.73%
Reason for the choice of particular hospital	**N**	**%**	**N**	**%**
I did have no choice	147	17.90%	125	17.86%
I wanted to be treated in this particular hospital	487	59.32%	429	61.29%
The hospital is located close to my place	187	22.78%	146	20.86%
Mode of admission to hospital	**N**	**%**	**N**	**%**
Brought by ambulance	142	17.88%	102	14.85%
Presented themselves	123	15.49%	82	11.94%
Referral letter from a doctor	529	66.62%	503	73.22%

Source: The author's own analysis.

Patients' views on the changes resulting from the introduction of the so-called 'hospital network'

The surveyed patients assessed the impact of the amended Act on improving the functioning of the healthcare system. In both stages of the survey, more than half of the patients (50.4% and 51.5%, respectively) said they had no opinion on this issue. An affirmative answer was given by 12.8% of the respondents before the amendment and 14.3% after the amendment, while a negative answer was given by 36.8% and 34.3%, respectively. The differences were statistically insignificant – $p>0.05$ (Figure 1).

Figure 1. Patients' assessment of the impact of the amended Act on improving the functioning of the healthcare system

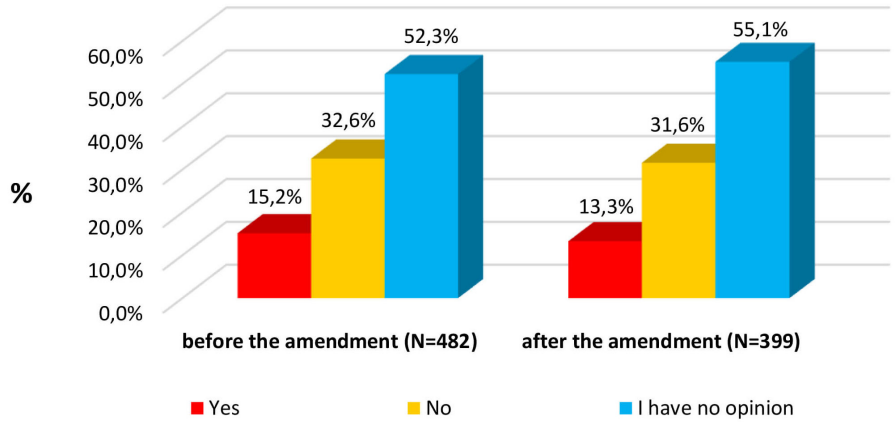


$chi^2=0.77$; $p>0.05$

Source: The author's own analysis.

More than half of the respondents in both stages of the survey (52.3% and 55.1%) had no opinion on the impact of the amended Act on the quality of provided services. 15.2% of the respondents before the amendment and 13.3% after the amendment thought that the Act had influenced the quality of services, while 32.6% and 31.6% did not feel such influence. The noted differences were statistically insignificant – $p>0.05$ (Figure 2).

Figure 2. Patients' assessment of the impact of the amended Act on improving the quality of provided services

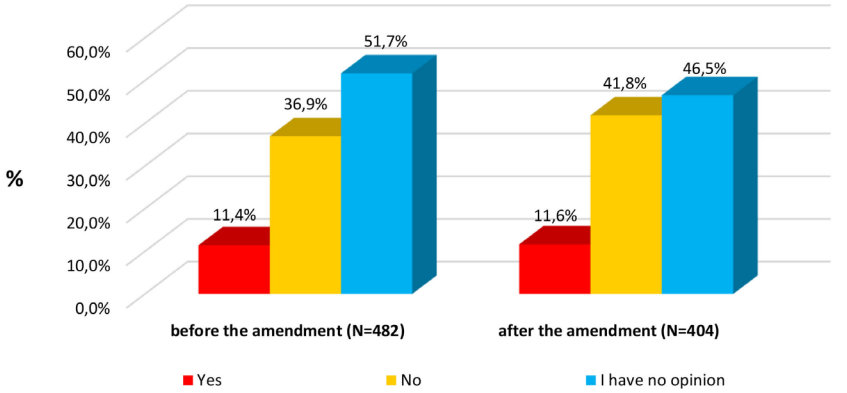


$chi^2=0.93$; $p>0.05$

Source: The author's own analysis.

More than 10% of the respondents before the amendment and 11.6% after the amendment believed that the Act would reduce queues to a specialist, while 36.9% and 41.8% of the surveyed patients believed that the Act would not have such impact. The majority of respondents (51.7% and 46.5%) declared no opinion on this issue. The differences were statistically insignificant – $p>0.05$ (Figure 3).

Figure 3. Patients' assessment of the impact of the amended Act on increasing availability of a specialist before and after the amendment to the Act

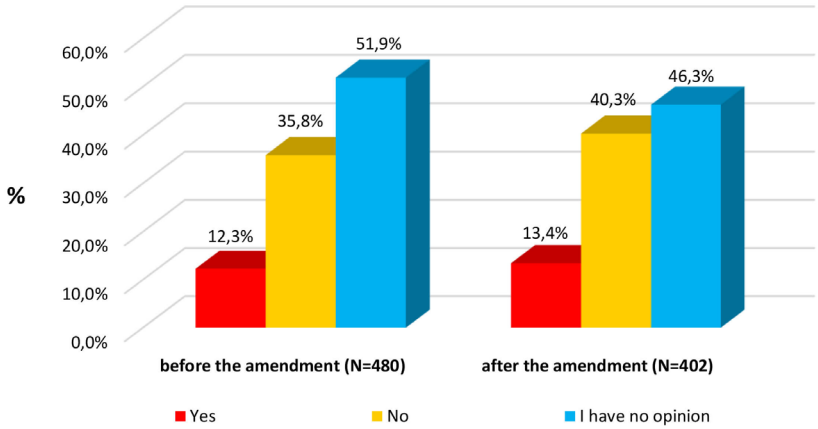


$chi^2=2.53$; $p>0.05$

Source: The author's own analysis.

12.3% of patients before the amendment and 13.4% after the amendment thought that the queues for hospital treatment would decrease thanks to the Act, while 35.8 % and 40.3 %, respectively thought that the Act would not reduce queues. Approximately half of the respondents (51.9% and 46.3%, respectively) had no opinion on this issue. The differences were statistically insignificant – $p>0.05$ (Figure 4).

Figure 4. Patients' assessment of the impact of the amended Act on increasing access to hospital treatment before and after the amendment of the Act

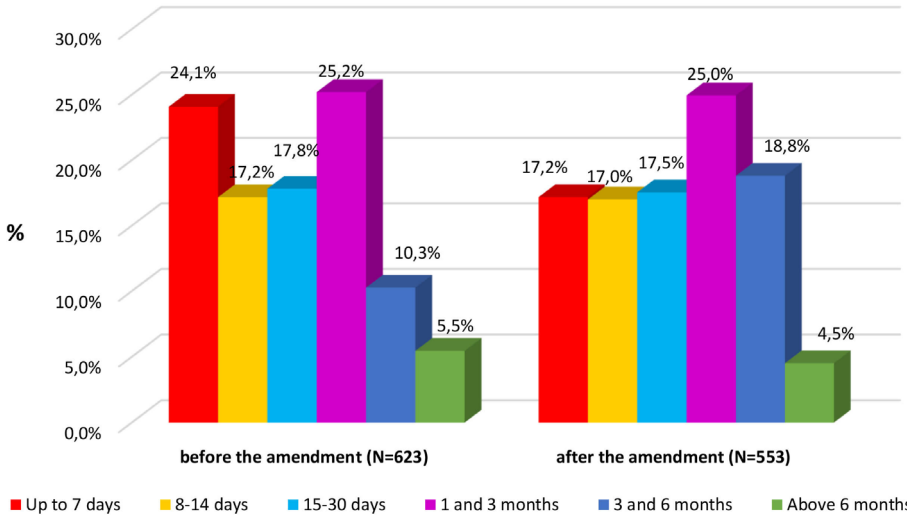


$chi^2=2.77;\ p>0.05$

Source: The author's own analysis.

The patients who had been admitted to hospital upon producing a referral letter from a doctor were asked how long they had waited after they had reported to hospital with their referral letter. One in four respondents in both stages of the survey (25.2% and 25.0%, respectively) claimed that the waiting time was between 1 and 3 months. The proportion of those waiting up to 7 days decreased (from 24.1% to 17.2%), while the proportion of those waiting between 3 and 6 months increased (from 10.3% to 18.8%). The observed differences proved to be statistically significant – $p<0.05$ (Figure 5).

Figure 5. Patients' assessment of the waiting time for admission to hospital, from the moment of presenting to hospital with a referral letter, before and after the amendment to the Act

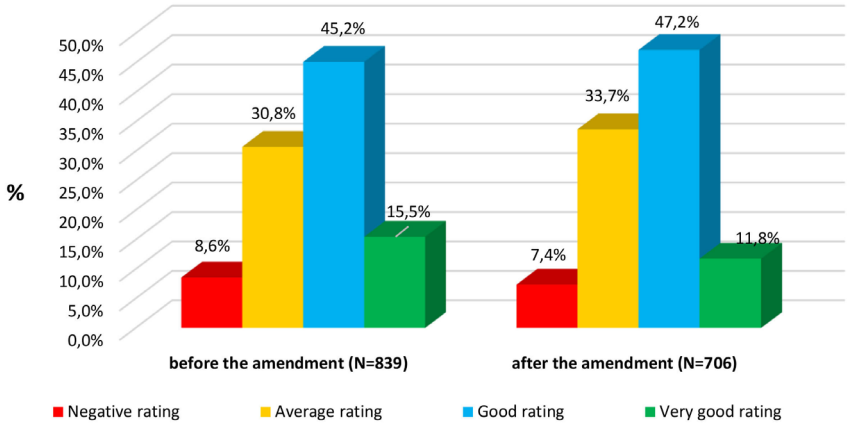


chi^2=22.16; p=0.0005

Source: The author's own analysis.

In the following section, patients' opinions on the functioning of the healthcare system and availability of specialist doctors and hospital treatment were analysed. While assessing the current healthcare system, both before and after the amendment to the Act, patients most often gave a rating of 4 (45.2% and 47.2%), while about one third of patients gave a rating of 3 (30.8% and 33.7%). The differences in the ratings before and after the amendment to the Act were statistically insignificant (p>0.05) (Figure 6).

Figure 6. Patient' assessment of the functioning of the healthcare system before and after the amendment to the Act

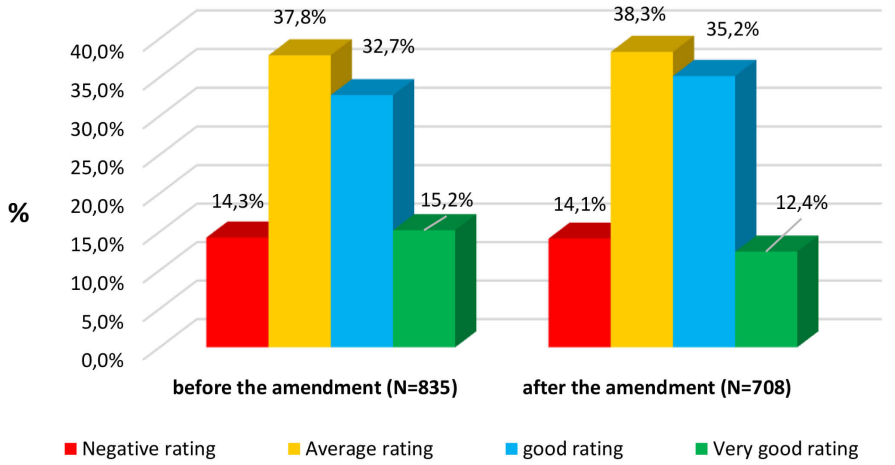


$chi^2=5.97$; $p>0.05$

Source: The author's own analysis.

Patients' opinions on availability of a specialist doctor were mostly average (37.8% before and 38.3% after the amendment) and good (32.7% and 35.2%, respectively). The observed differences proved to be statistically insignificant – $p>0.05$ (Figure 7).

Figure 7. Patients' assessment of availability of a specialist doctor before and after the amendment to the Act

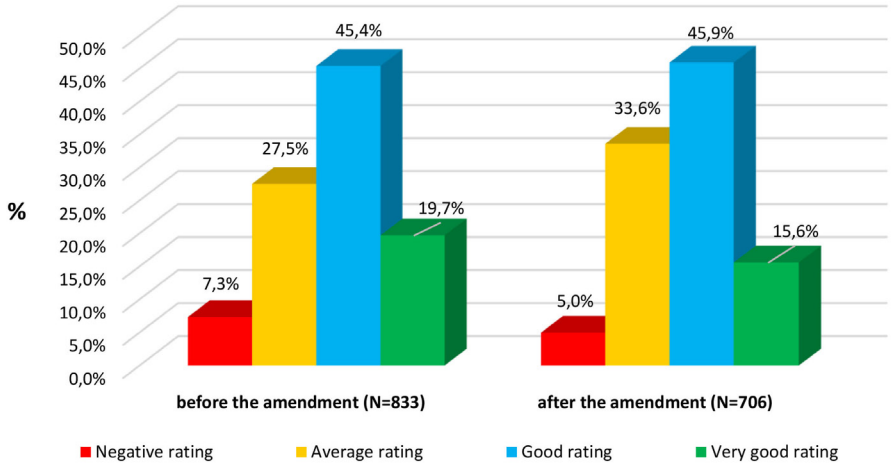


$chi^2=2.84$; $p>0.05$

Source: The author's own analysis.

More than 45% of patients in both stages of the survey (45.4% and 45.9%) gave a good rating in the availability of hospital treatment category. The percentage of those giving an average rating increased (from 27.5% to 33.6%), while the percentage of those giving a very good rating and a rating of 2 decreased (from 19.7% to 15.6% and from 7.3% to 5.0%, respectively). The differences proved to be statistically significant – $p<0.05$ (Figure 8).

Figure 8. Patients' assessment of availability of hospital treatment before and after the amendment to the Act



$chi^2=12.6$; $p=0.0135$

Source: The author's own analysis.

The multivariate ANOVA model was used to analyse the impact of the amendment to the Act on the change in patients' assessment of hospital management. The analysis showed that in all domains, the assessment of the functioning of the Emergency Room was similar in the group of people completing the survey before and after the amendment to the Act.

While assessing the Emergency Room both before and after the amendment to the Act, patients gave the highest rating to domain 2, i.e. assessment of doctors' performance. The average rating of patients in this domain before the amendment was 4.44, while after the amendment it was 4.38. The average difference was -0.06 ($p<0.05$).

Average ratings above 4 also applied to domain 3, i.e. assessment of performance of nursing and auxiliary staff (4.38 before the amendment and 4.36 after the amendment), and domain 5, i.e. assessment of housing and catering conditions (4.31 before the amendment and 4.27 after amendment). In both of these domains, there was a small, non-significant decrease in average scores of -0.02 and -0.04, respectively. In domain 4, regarding assessment of the organisation of

staff performance and the information given to the patient, the average rating before the amendment was 3.92, while after the amendment – 3.87. The small decrease in the average rating of -0.05 was statistically in significant (Table 2).

Table 2. Comparison of the average rating of the Emergency Room in each domain and the global rating before and after the introduction of the so-called 'network of hospitals'

	Average rating before introduction of the amendment to the Act[1]	Average rating after introduction of the amendment to the Act[1]	Average rating diffference[2]	95% confidence interval	
domain 1	4.44	4.38	-0.06	-0.12	-0.01
domain 2	4.38	4.36	-0.02	-0.09	0.03
domain 3	3.92	3.87	-0.05	-0.14	0.04
domain 4	4.31	4.27	-0.04	-0.11	0.03
In total	4.34	4.29	-0.04	-0.10	0.01

[1] values were estimated taking into account the co-variates differentiating the study populations in the model before and after the amendment

[2] values were estimated after taking into account correction for multiple comparisons of all domains

domain 1 – impact of the amended Act on the functioning of the healthcare system,

domain 2 – assessment of doctors' performance,

domain 3 – assessment of performance of nursing and auxiliary staff,

domain 4 – assessment of the organisation of staff performance and the information given to the patient

Source: The author's own analysis.

In the assessment of hospital wards both before and after the amendment, the highest average scores were observed in domain 3, i.e. assessment of performance of nursing and auxiliary staff. The average score in this domain was 4.55 before the amendment and 4.56 after the amendment. The difference of 0.01 was statistically insignificant. The second highest average score noted in patients' ratings regarded domain 2, which included assessment of

doctors' performance. The average rating of doctors' performance was 4.51 before the amendment and 4.46 after the amendment to the Act. The average decrease in ratings was -0.05 and the value was statistically insignificant. Domain 4 comprised questions on assessment of the organisation of staff performance and the information given to the patient. In this domain, the average patient rating was 4.37 before the amendment and 4.36 after the amendment, and the difference of -0.01 was statistically insignificant. Ratings above 4 also applied to accommodation and catering conditions. Before the amendment, patients gave the average rating of 4.24 in this domain, while after the amendment it was 4.23. The difference between the ratings was -0.01 and was statistically insignificant (Table 3).

Table 3. Comparison of the average rating of hospital wards in each domain and the global rating before and after the introduction of the so-called 'hospital network'

	Average rating before introduction of the amendment to the Act[1]	Average rating after introduction of the amendment to the Act[1]	Average rating difference[1]	95% confidence interval	
domain 1	4.51	4.46	-0.05	-0.11	-0.01
domain 2	4.55	4.56	0.01	-0.2	0.09
domain 3	4.37	4.36	-0.01	-0.09	0.02
domain 4	4.24	4.23	-0.01	-0.09	0.03
In total	4.39	4.37	-0.02	-0.09	0.03

[1] values were estimated taking into account the co-variates differentiating the study populations in the model before and after the amendment

[2] values were estimated after taking into account correction for multiple comparisons of all domains

domain 1 – impact of the amended Act on the functioning of the healthcare system,

domain 2 – assessment of doctors' performance,

domain 3 – assessment of performance of nursing and auxiliary staff,

domain 4 – assessment of the organisation of staff performance and the information given to the patient

Source: The author's own analysis.

Discussion

The amendment to the Act on Healthcare Services Financed from Public Funds of 23 March 2017 introduced a number of significant changes in the organisation and financing of the healthcare system in Poland. The aim of the introduction of the system of basic hospital provision of healthcare services was to improve patients' access to specialist services, in particular by ensuring comprehensiveness and coordination of outpatient, inpatient and rehabilitation services.

It should be emphasised that ratings regarding the functioning of the healthcare system both before and after the introduction of new regulations were in the opinion of about 40% of patients negative or average, and more than half of them gave equal ratings regarding the availability of specialists in both stages of the survey. Furthermore, the proportion of patients rating the availability of hospital care positively decreased after the change in legislation (65% vs 61%). The situation in which the proposed changes are not assessed as potentially beneficial for patients may indicate a low level of public confidence in the legislator.

While assessing the Emergency Room, both before and after the amendments to the Act, respondents awarded the highest rating to doctors' performance. The average rating in this domain before the amendment was 4.44, while after the amendment it was 4.38. The ratings regarding performance of nursing and auxiliary staff were good (4.38 before the amendment and 4.36 after the amendment); housing and catering conditions were rated similarly (4.31 before the amendment and 4.27 after the amendment). Patients gave the worst ratings to organisation of staff performance and the information given to the patient. However, the ratings were still good, with an average value of 3.92 before the amendment and 3.87 after the amendment to the Act.

While assessing hospital wards both before and after the amendment, the highest average ratings were given to performance of nursing and auxiliary staff. The average rating in this domain was 4.55 before the amendment and 4.56 after the amendment. The second highest rating was awarded for doctors' performance. The patients rated this domain on average by

awarding the value of 4.51 before the amendment and 4.46 after the amendment. They rated organisation of staff performance and the information given to the patient most negatively. However, the ratings were still high. In this domain, the average rating was 4.37 before the amendment and 4.36 after the amendment.

In contrast to surveys carried out in other healthcare establishments in the Lodz voivodship, the overall assessment of the Emergency Department was lower compared to the overall assessment of hospital wards [19, 21, 22, 29]. A higher level of patient satisfaction with care in hospital wards compared with services received in the hospital Emergency Room may be due to the fact that patients associate the health outcome mainly with the performance of the ward personnel. When admitted to hospital, patients are likely to experience higher levels of stress, have to sign a number of documents, and feel the time pressure of dealing with a large number of people. All these may contribute to lower levels of satisfaction with care in the Emergency Room.

Due to the clinical nature of hospital departments, medical students are also involved in the provision of healthcare, which is undoubtedly a considerable factor. Presence of students and the patient-student relationship definitely influence patients' perceptions of various elements that then make up the overall assessment of satisfaction with medical care. Studies conducted in medical centres around the world reveal that presence of students during usual daily clinical practice can positively influence patients' satisfaction with medical care. To a large extent, this effect depends on adequate preparation of the patient for the presence of students and adequate involvement of the doctor in the process of providing healthcare services. Experience of patients which they gained beforehand while receiving care in clinical settings is also an important element [23, 24, 25].

It should be noted that the lack of changes in the level of satisfaction of patients receiving hospital medical care before and after the introduction of the 'hospital network' may be related to the short time between the amendment to the Act and the day the second stage of the survey was conducted. Within the period of six months following the introduction of the new legislation, the hospital was under organisational transformation which involved adaptation

to the new requirements of the implemented amendment to the Act. The introduction of major changes associated with the 'hospital network' undoubtedly caused chaos in the organisation of work and destabilised, to a greater or lesser extent, its functioning. This situation posed a potential risk of decreasing patient satisfaction with the care offered by the hospital. The lack of changes in patients' opinion on the functioning of the health establishment should be undoubtedly considered a success. Keeping a constant level of patient satisfaction with offered services in the changing legal and organisational realities of the healthcare system was undoubtedly a major challenge for the hospital management and medical and administrative personnel.

Results of studies confirm that patient satisfaction is very much dependent on overall nursing care [26, 27]. This vital importance of the patient nursing process is contributed by various elements. Nurses spend most time with patients. They are responsible for assisting with nursing activities, provide psychological support and perform a lot of medical procedures. All these nursing tasks are highly valued and they rank very high in the hierarchy of determinants of patient satisfaction. Patients expect that nurses will be responsive to their requests and needs, empathic, will respect all rights, will be patient and understanding towards them and their families, and will efficiently perform medical and nursing duties [28].

Regular assessment of patient satisfaction with care offered by a medical facility is an important source of information on the effectiveness of managing the hospital by managerial staff and facilitates selection of proper decisions by hospital personnel. Involving staff in the process of implementing solutions aiming at improving patient satisfaction with care helps to improve the quality of services.

Conclusions

1. The introduction of organisational and legal changes under amendments to the Act on Healthcare Services Financed from Public Funds did not affect the overall level of patient satisfaction with healthcare in the study group.

2. The level of patient satisfaction with care in the Emergency Room and hospital wards both before and after the amendment to the Act was satisfactory.
3. In order to improve the level of patient satisfaction with care in the Emergency Room, particular attention should be paid to needs of the least satisfied patients, i.e. the elderly and those who came to a particular hospital without making a decision regarding the choice of health establishment, as well as those who had previously received care in this particular hospital.
4. Both before and after the amendment to the Act, the majority of patients had no opinion or were convinced that the changes associated with the amendment to the Act would not affect the functioning of selected elements of the healthcare system.
5. Introduction of significant organisational changes in the healthcare system requires the legislator and persons in charge of healthcare establishments to implement logistic solutions.

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