



ORIGINAL PAPER

Comparative analysis of patients' satisfaction level, hospitalized before and during the COVID-19 pandemic

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ABSTRACT

Introduction and aim. Measurement of the satisfaction level with health services is the most frequently used indicator, mainly because of its importance for determining the quality of the care offered. It is the key to succeed in achieving high-quality healthcare. The purpose of this study was to create a retrospective comparative analysis of the satisfaction level amongst patients hospitalized before and during the COVID-19 pandemic.

Material and methods. The study covered a total of 966 patients in 19 hospital wards, in the fourth quarter of 2019 (before the pandemic) and in the second quarter of 2021 (during the pandemic) at the Masovian Specialist Hospital in Radom. The level of patient satisfaction was assessed based on the questionnaire prepared and approved by the Quality Assurance Team in the Masovian Specialist Hospital. The statistical analysis was carried out on the basis of the STATISTICA 10.1 program, using the Pearson's chi square test, for the significance level at $p < 0.05$.

Results. The high level of satisfaction of patients staying in the hospital during the pandemic applied to the widely understood medical and nursing care as well as sanitary conditions in wards, especially the cleanliness of rooms, bed linens and sanitary facilities.

Conclusion. The biggest dissatisfaction of hospitalized patients during the COVID-19 pandemic involved certain restrictions of visitations and using pastoral services.

Keywords. COVID-19 pandemic, satisfaction, quality of care

Introduction

One of the fundamental aspects of proper functioning nowadays health care is the high quality of provided services including professionalism and competence of personnel staff, availability to the medical services, continuity of care, following developed procedures, adjusting healthcare to the patient's needs and patient's satisfaction.^{1,2} The term „satisfaction” comes from the Latin language (which means: enough, sufficiently), it determines subjective feeling of being satisfied, which is connected to personal experiences, expectations and values.³ It is patient's emotional reaction and answer to the experiences resulting from the care provided, espe-

cially to the constantly changing situation in the market of providing healthcare, an external system of accreditation, growing competition and care about the patient force us to start even more effective methods to manage facilities. The indicator, which is essential for determining the quality of care offered, is the measurement of patient's satisfaction level with health services. The analysis of obtained results from those studies enables the introduction of beneficial changes and suggests the direction of further quality-aiming activities in the region of medical services.⁴⁻⁶ The current epidemiological situation in the country, connected to the appearance of the SARS-CoV-2 virus, requires from every member of the

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health system, adaptation to the new situation, implementation of specific measures and engaging intensified effort in order to fight the coronavirus.⁷

Aim

The purpose of this study was a retrospective comparative analysis of the satisfaction level amongst patients hospitalized before and during the COVID-19 pandemic.

Material and methods

The study covered a total of 966 patients in 19 hospital wards, in the fourth quarter of 2019 (before the pandemic) and in the second quarter of 2021 (during the pandemic) at the Masovian Specialist Hospital in Radom. Consent to review of medical records (that are survey results) was gained from the Management of the Masovian Specialist Hospital sp. z o. o. in Radom, where a periodic assessment system outlining patients' satisfaction with medical services, within the Quality Management System, is being implemented since 2018 (hospital approval: 338, date: 10.01.2022). The statistical analysis was carried out based on the STATISTICA 10.1 program (Statsoft Statistica 10.1, Lublin, Poland) using Pearson's chi-square test, for the significance level at $p < 0.05$.

Results

The study took place in 19 hospital wards at the Masovian Specialist Hospital in Radom, in the fourth quarter of 2019 and in the second quarter of 2021 amongst insofar hospitalized patients.

In this patient's satisfaction survey in 2019, 574 out of 949 surveys were fully completed with the return factor reaching 60.48%. Meanwhile in 2021, in the research participated 392 patients (at 615 surveys distributed, the return indicator was 63.73%) Less quantity of respondents was probably due to the former epidemic situation in our country. The most numerous group in 2019 as well as in 2021 were people aged 40 to 65 years, (2019 – 224, 2021 – 153), with a dominance of women. Most surveys were fulfilled by patients and time spent at the hospital was from 3 to 7 days.

Conducted surveys made it possible to analysis the most significant aspects of hospital healthcare, which may influence the level of patients' satisfaction:

- actions linked to admission to the hospital and the ward,
- health-care field concerning stay on the ward: an issue of patient's rights, the topography of the ward, the daily schedule, providing meals, maintaining cleanness, pain relief effectiveness during hospitalization, possibility to use pastoral services, and opportunity of visits,
- assessment of the medical care, nurse/maternity care and rehabilitation care,

- actions associated with executing diagnostic tests,
- overall, subjective evaluation of the level of services provided at Masovian Specialist Hospital (Tab.1).

The vast majority of respondents expressed their contentment in hospital care, both before and during the COVID-19 pandemic at the Masovian Specialist Hospital in Radom. The aspect of cleanliness in the wards deserves special emphasis, which is connected to the raise of the sanitary regime during the COVID-19 pandemic. Significant increase of extremely good opinions linked to the cleanness of bed linen (up to approximately 8%) as well as neatness of sanitary facilities (up to approximately 10%) compared to the times before pandemic. Variety and adequate temperature of served meals were also appreciated.

Due to the epidemic threat, to ensure patient safety, in the second quarter of 2021 possibility of visits has been restricted, which was met with the displeasure of around 31% of hospitalized patients. Accessibility and ease of contact with doctors and nurses were slightly worse assessed (decrease from very good ratings to good ratings approximately by 10%) Increase in dissatisfaction among hospitalized patients during the COVID-19 pandemic involved certain restrictions on using pastoral services and rehabilitation care.

It is worth mentioning that despite restrictions and changes in organizations of facility's work, the level of patients' satisfaction with medical and nurse healthcare is at the same level as in the analyzed quarters. Nursing interventions were also highly rated, especially in pain relief effectiveness, reacting to worse patient's well-being and assistance in self-reliant activities. Whilst no statistically significant dependencies were concluded.

In spite of the pandemic situation, in terms of organization, the standard of care during admission to the hospital has not changed significantly compared to the period before the pandemic. Short waiting time for admission to the ward in the SOR (up to 1 hour) was confirmed by roughly 40% of respondents, yet 20% of patients had waited above 2 hours. During preliminary diagnosis before admission to the ward, almost 90% of the surveyed were treated with kindness and solicitude from the therapeutic team. Growth of good opinions in terms of providing information about the current health condition and planned treatment was observed in the second quarter of 2021. The results of patient's satisfaction with medical services in 2019 are similar to those obtained in 2021, which were dominated by the COVID-19 pandemic, which means that it was possible to manage a high level of medical services despite the tough epidemic situation.

Table 1. Satisfaction of patients hospitalized in the IV quarter of 2019 and the II quarter of 2021

				Q4 2019	Q2 2021
Name of the hospital: Masovian Specialist Hospital				19 wards	
Amount of distributed questionnaires:				949	615
Amount of returned questionnaires:				574	392
A. ADMISSION TO THE HOSPITAL – PLEASE EVALUATE					
1. Waiting time for admission to the ward in the Emergency Room	up to 1 hour	up to 2 hours	above 2 hours	no opinion	no answer
Q4 2019	42.86% n=246	30.31% n=174	20.56% n=118	2.79% n=16	3.48% n=20
Q2 2021	43.37% n=170	29.08% n=114	19.9% n=78	5.36% n=21	2.3% n=9
Statistics			Chi^2=5.29, Df=4, p=0.258		
2. Ensuring the care and kindness of medical staff in the Emergency Room	badly	good	very good	no opinion	no answer
Q4 2019	3.48% n=20	51.57% n=20	37.46% n=215	4.01% n=23	3.48% n=20
Q2 2021	2.55% n=13	58.16% n=228	33.16% n=130	4.08% n=16	2.04% n=8
Statistics			Chi^2=5.40, Df=4, p=0.248		
3. Enough data about admission to hospital (information about the patient's condition and planned course of treatment)	badly	good	very good	no opinion	no answer
Q4 2019	6.62% n=38	49.13% n=282	29.97% n=172	5.05% n=29	9.23% n=53
Q2 2021	3.32% n=13	57.91% n=227	26.79% n=105	7.14% n=28	4.85% n=19
Statistics			Chi^2=16.78, Df=4, p=0.002		
B. ADMISSION TO THE HOSPITAL WARD – PLEASE EVALUATE					
1. Where you accompanied by the hospital staff on your way from the Emergency Room to the ward?	yes		no	no option	no answer
Q4 2019	89.55% n=514		6.10% n=35	3.31% n=19	1.05% n=6
Q2 2021	94.90% n=372		1.53% n=6	2.55% n=10	1.02% n=4
Statistics			Chi^2=12.62, Df=3, p=0.006		
2. During your administration to the ward. were you acquainted with your Patient Rights and indicated where they are available?	yes		no	no option	no answer
Q4 2019	79.97% n=459		13.07% n=75	4.53% n=26	2.44% n=14
Q2 2021	81.89% n=321		12.24% n=48	3.83% n=15	2.04% n=8
Statistics			Chi^2=0.66, Df=3, p=0.882		
3. Where you familiarized with the topography of the ward (location of bathrooms. doctor's office. nursing station. etc.)?	yes		no	no option	no answer
Q4 2019	86.59% n=497		7.49% n=43	2.96% n=17	2.96% n=17
Q2 2021	89.54% n=351		7.14% n=28	2.04% n=8	1.28% n=5
Statistics			Chi^2=3.94, Df=3, p=0.268		
4. During admission to the ward. were you informed about the daily sch	yes		no	no option	no answer
Q4 2019	77.87% n=447		13.94% n=80	4.01% n=23	4.18% n=24
Q2 2021	77.55% n=304		13.78% n=54	6.38% n=25	2.30% n=9
Statistics			Chi^2=5.06, Df=3, p=0.167		

C. STAY IN THE WARD – PLEASE EVALUATE

	badly	good	very good	no opinion	no answer
1. Cleanliness in sickrooms					
Q4 2019	0.70% n=4	46.34% n=266	48.43% n=278	2.96% n=17	1.57% n=9
Q2 2021	0.26% n=1	48.72% n=191	49.74% n=195	1.02% n=4	0.26% n=1
Statistics	Chi^2=9.15, Df=4, p=0.057				
2. Cleanliness of the bed linen					
Q4 2019	0.70% n=4	43.21% n=248	50.52% n=290	1.92% n=11	3.66% n=21
Q2 2021	0% n=0	39.03% n=153	58.42% n=229	1.53% n=6	1.02% n=4
Statistics	Chi^2=12.87, Df=4, p=0.012				
3. Cleanliness of bathrooms and toilets					
Q4 2019	6.1% n=35	56.97% n=327	24.09% n=167	2.96% n=17	4.88% n=28
Q2 2021	2.81% n=11	50.26% n=197	40.56% n=159	3.34% n=17	2.04% n=8
Statistics	Chi^2=22.57, Df=4, p=0.0002				
4. Providing information on the diet used					
Q4 2019	2.09% n=12	47.39% n=272	34.32% n=197	11.5% n=66	4.7% n=27
Q2 2021	3.06% n=12	47.96% n=188	35.46% n=139	11.73% n=46	1.79% n=7
Statistics	Chi^2=6.63, Df=4, p=0.157				
5. Temperature of meals					
Q4 2019	14.63% n=83	55.05% n=316	19.34% n=111	6.62% n=38	4.36% n=25
Q2 2021	5.61% n=22	57.4% n=225	30.36% n=119	5.87% n=23	0.77% n=3
Statistics	Chi^2=39.9, Df=4, p<0.00001				
6. Variety of meals					
Q4 2019	9.76% n=56	52.44% n=301	23% n=132	10.98% n=63	3.83% n=22
Q2 2021	5.36% n=21	54.34% n=213	30.61% n=120	8.42% n=33	1.28% n=5
Statistics	Chi^2=17.97, Df=4, p=0.001				
7. Pain relief effectiveness					
Q4 2019	0.87% n=5	42.16% n=242	41.64% n=239	9.76% n=56	5.57% n=32
Q2 2021	2.55% n=10	39.8% n=156	48.47% n=190	7.4% n=29	1.79% n=7
Statistics	Chi^2=16.75, Df=4, p=0.002				
8. Possibility of visits					
Q4 2019	0.35% n=2	37.98% n=218	50% n=287	3.83% n=22	7.84% n=45
Q2 2021	31.38% n=123	19.13% n=75	9.95% n=39	37.04% n=106	12.5% n=49
Statistics	Chi^2=411.18, Df=4, p<0.00001				
9. Possibility to use pastoral services					
Q4 2019	0.35% n=2	33.45% n=192	50.17% n=288	11.67% n=67	4.36% n=25
Q2 2021	3.06% n=12	43.62% n=171	36.22% n=142	15.05% n=59	2.04% n=8
Statistics	Chi^2=34, Df=4, p<0.00001				

D. MEDICAL CARE – PLEASE EVALUATE

	badly	good	very good	no opinion	no answer
1. Availability and ease of contact with a doctor if needed					
Q4 2019	2.61% n=15	44.43% n=255	47.04% n=270	3.83% n=22	2.09% n=12
Q2 2021	4.34% n=17	55.36% n=217	33.93% n=133	5.36% n=21	1.02% n=4
Statistics	Chi^2=20.21, Df=4, p=0.0005				

2.	Ensuring intimacy and privacy during medical examinations	badly	good	very good	no opinion	no answer
	Q4 2019	1.74% n=10	44.77% n=257	48.26% n=277	3.31% n=19	1.92% n=11
	Q2 2021	1.53% n=6	52.55% n=206	40.82% n=160	3.32% n=13	1.79% n=7
	Statistics	Chi^2=5.87, Df=4, p=0.209				
3.	Showing interest in patient's problems	badly	good	very good	no opinion	no answer
	Q4 2019	2.26% n=13	45.99% n=264	42.68% n=245	5.92% n=34	3.14% n=18
	Q2 2021	2.81% n=11	51.02% n=200	40.05% n=157	3.83% n=15	2.3% n=9
	Statistics	Chi^2=4.49, Df=4, p=0.343				
4.	Understandable provision of information about current health condition. test results. planed treatment	badly	good	very good	no opinion	no answer
	Q4 2019	3.66% n=21	45.12% n=259	44.43% n=255	4.88% n=28	1.92% n=11
	Q2 2021	4.34% n=17	48.21% n=189	40.05% n=157	4.85% n=19	2.55% n=10
	Statistics	Chi^2=2.23, Df=4, p=0.694				
E. NURSING/MATERNITY CARE – PLEASE EVALUATE						
1.	Availability and ease of contact with a nurse/midwife if needed	badly	good	very good	no opinion	no answer
	Q4 2019	0.17% n=1	28.57% n=164	67.6% n=388	0.87% n=5	2.79% n=16
	Q2 2021	0.26% n=1	37.5% n=147	58.67% n=230	1.79% n=7	1.79% n=7
	Statistics	Chi^2=11.29, Df=4, p=0.024				
2.	Nurses/midwives’ response to reported pain. worse well-being or other patient’s discomfort	badly	good	very good	no opinion	no answer
	Q4 2019	0.17% n=1	27.35% n=157	65.68% n=377	2.79% n=16	4.01% n=23
	Q2 2021	0.51% n=2	34.95% n=137	59.44% n=233	2.55% n=10	2.55% n=10
	Statistics	Chi^2=8.19, Df=4, p=0.085				
3.	Assistance in daily activities (e.g. personal hygiene. moving. using the toilet. etc.)	badly	good	very good	no opinion	no answer
	Q4 2019	0.35% n=2	29.62% n=170	53.48% n=307	10.28% n=59	6.27% n=36
	Q2 2021	0.51% n=2	35.97% n=141	56.89% n=223	4.34% n=17	2.3% n=9
	Statistics	Chi^2=5.53, Df=4, p=0.237				
4.	Providing information on performed procedures and planned nursing/obstetric activities	badly	good	very good	no opinion	no answer
	Q4 2019	0.35% n=2	37.8% n=217	51.22% n=294	5.57% n=32	5.05% n=29
	Q2 2021	1.02% n=4	41.33% n=162	50.51% n=198	3.83% n=15	3.32% n=13
	Statistics	Chi^2=5.53, Df=4, p=0.237				
5.	Ensuring a sense of intimacy and privacy during nursing/ obstetric procedures	badly	good	very good	no opinion	no answer
	Q4 2019	0.35% n=2	36.93% n=212	53.31% n=306	5.4% n=31	4.01% n=23
	Q2 2021	0% n=0	43.88% n=172	48.98% n=192	4.08% n=16	3.06% n=12
	Statistics	Chi^2=6.45, Df=4, p=0.168				
F. REHABILITANS – PLEASE EVALUATE (if applicable)						
1.	Attitude towards the patient (kindness. care and interest in patient. etc.)	badly	good	very good	no opinion	no answer
	Q4 2019	0% n=0	19.51% n=112	28.4% n=163	15.16% n=87	36.93% n=212
	Q2 2021	0% n=0	15.31% n=60	21.94% n=86	20.66% n=81	42.09% n=165
	Statistics	Chi^2=11.73, Df=4, p=0.019				

2.	Respect for dignity and intimacy during performed treatments	badly	good	very good	no opinion	no answer
	Q4 2019	0% n=0	17.94% n=103	29.44% n=169	14.81% n=85	37.8% n=217
	Q2 2021	0% n=0	15.56% n=61	19.9% n=78	20.66% n=81	43.88% n=172
	Statistics	Chi^2=15.86, Df=4, p=0.003				
3.	Understandable transfer of information about the improvement process (types of exercise. how to perform them. etc.)	badly	good	very good	no opinion	no answer
	Q4 2019	0% n=0	18.82% n=108	25.26% n=145	16.2% n=93	39.72% n=228
	Q2 2021	0% n=0	12.76% n=50	19.9% n=78	22.7% n=89	43.88% n=172
	Statistics	Chi^2=18.72, Df=4, p=0.0001				
G. DIAGNOSTIC TESTS – PLEASE EVALUATE (if applicable)						
1.	Staff culture in diagnostic offices (e.g. X-ray. ultrasound. etc.)	badly	good	very good	no opinion	no answer
	Q4 2019	1.39% n=8	37.63% n=216	43.38% n=249	6.1% n=35	11.5% n=66
	Q2 2021	0.77% n=3	34.69% n=136	39.03% n=153	10.46% n=41	15.05% n=59
	Statistics	Chi^2=10.32, Df=4, p=0.035				
2.	Respect for dignity and intimacy during performed treatments	badly	good	very good	no opinion	no answer
	Q4 2019	1.05% n=6	36.41% n=209	44.77% n=257	7.32% n=42	10.45% n=60
	Q2 2021	0.26% n=1	34.95% n=137	40.31% n=158	7.4% n=29	17.09% n=67
	Statistics	Chi^2=11.04, Df=4, p=0.026				
H. OVERALL EVALUATION						
1.	How do you evaluate (in general) the level of services provided at Masovian specialist hospital sp. z o. o. in Radom?	badly	good	very good	no opinion	no answer
	Q4 2019	0.52% n=3	50% n=287	45.47% n=261	1.05% n=6	2.96% n=17
	Q2 2021	0.77% n=3	42.35% n=166	49.49% n=194	3.83% n=15	3.57% n=15
	Statistics	Chi^2=12.48, Df=4, p=0.014				
I. SOCIODEMOGRAPHIC INFORMATION						
1.	Age:	Q4 2019		Q2 2021		
	up to 39	19.51% n=112		30.1% n=118		
	40-65	39.02% n=224		39.03% n=153		
	66 and above	35.71% n=205		28.83% n=113		
	no answer	5.75% n=33		2.04% n=8		
2.	Gender:	Q4 2019		Q2 2021		
	woman	49.83% n=286		58.67% n=230		
	man	43.9% n=252		37.5% n=147		
	no answer	6.27% n=36		3.83% n=15		
3.	Time spent at the hospital:	Q4 2019		Q2 2021		
	up to 3 days	17.94% n=103		31.89% n=125		
	from 3 to 7 days	28.75% n=165		33.93% n=133		
	from 7 to 14 days	19.69% n=113		20.15% n=79		
	above 14 days	28.57% n=164		8.93% n=35		
	no answer	5.05% n=29		4.85% n=19		

Discussion

A patient satisfaction survey on exercised hospital care is an integral criterion of the assessment of the quality of a health care unit. Its realization enables adjusting medical facility to the patient's needs and expectations, as well as creating a positive reputation on the market of healthcare providers. Respecting the patient's requirements guarantee high quality of healthcare.⁸ The periodic patient satisfaction assessment system at the Masovian Specialist Hospital, which is functioning in terms of The Quality Management System, is used to assess certain aspects of hospital care, enabling efficient identification of problems. It enables planning and implying corrective action, directed at improving the quality of medical services, thus raising the patient's satisfaction.

According to some authors, factors that influence the quality of the services provided and also affect the level of beneficiaries' satisfaction are inter alia: a way of patient's treatment, quantity and quality of provided information, attention and time dedicated to the patient by doctor and nurse, as well as safety and access to health services. It is being emphasized that doctors and nurses are the most relevant persons taking part in the prevention, diagnostics, and further treatment and nursing of the patient. Both patient treatment and nursing are complex and complementary processes.^{3,9} In this research it was being analyzed amongst the other, availability and ease of contact with a doctor or a nurse, the way of patient's treatment, assurance of intimacy and privacy during medical examinations. In this respect, over 80% of patients that had stayed at the Masovian Specialist Hospital in Radom showed contentment, although in comparison to the time before pandemic, mild decrease in ratings had been observed, thus from very good to good – approximately by 10%.

Other researches confirm that amongst medical staff, persons with the most personal contact with patients are primarily nurses, thus the patient's satisfaction is often perceived through the prism of nursing care. Per expectations of hospitalized patients on the surgical wards, in the exercise of preoperative care, it is necessary to take into consideration kindness, attention, understanding of needs, reaction speed to the problems and requests of the patient, along with providing intimacy during performed treatments. Those indicators are strongly affecting the development of the level of satisfaction directly associated with nursing care recipients.⁹⁻¹¹

Time of the COVID-19 pandemic conveys several challenges in everyday nursing practice, such as fear of being infected, concerns about our loved ones, the unpredictability of events, tiredness, working under chronic stress, and feeling hopeless towards doing current professional duties. The pandemic situation revealed any weaknesses, highlighted the importance of communica-

tion, the necessity of procedures strictly being followed, and the creation of new ones adequate to the situation.

The first reports from foreign, particularly from Asia, but also from native research facilities reaffirms that in the present epidemiological situation, nurses managed to launch constructive strategy which includes coping with the consequences of the experienced psychological stress.^{12,13}

Despite numerous concerns and emotional experiences, the nursing staff holds care for the patient by bearing in mind the bio-psycho-social needs, which finds confirmation in the own researches. Beyond 80% of survey participants pleasantly evaluated nursing interventions, notably staff reaction to the pain reported, worse wellness, help in self-reliant activities.

At the same time, as the survey indicates in the second quarter of 2021 (during the pandemic) 31% of patients showed discontent due to visiting restrictions. Implemented restrictions were designed to reduce SARS-CoV-2 virus epidemic risks as well as to improve the health and safety of patients and their families.

Profitable aspects of pandemic changes should be emphasized, including triage and organizing admission to the hospital, shortening the time of hospitalization, limiting the movement in the hospital, and introducing teleconference to an everyday work schedule.

The medical personnel's awareness has also increased in terms of obeying sanitary regimes and usage of personal protective equipment, which significantly reduced the number of nosocomial infections.¹⁴ It also finds its acknowledgment in this research, since a substantial rise in very good opinions, regarding cleanness in wards (specifically tidiness of rooms, bed linens and sanitary facilities), has been observed compared to the time before pandemic.

What should be taken into particular consideration is respect for the patient's rights by medical personnel, being the statutory duty of everyone participating in providing healthcare services. The Ombudsman of Patient Rights is the guardian of the proper realization of the patient's rights, who at the request of the patient or his family, can initiate explanatory proceedings and undertake intervention measures.^{7,15,16} According to the own research, above 80% of the surveyed confirmed being acknowledged with patient's rights. At the Masovian Specialist Hospital, a full version of the Patient's Statement of Rights and Responsibilities can be found in every ward at the nurses' station, and it is available upon the patient's request. Whereas Patient Rights Card is located in a widely available and conspicuous place in every ward. To meet the expectations and patients' rights during an epidemic emergency, medical facility managers should make it easier for the ill ones to have telephone contact with their relatives, provide information to families via phone, and where possible – allow per-

sonal visits while maintaining the sanitary regime. In the presented study valuable knowledge of patients' satisfaction with medical healthcare was gained. The analysis of indicators, which do not comply with patient's requirements, gives a possibility of introducing changes adapting healthcare entities to the needs and expectations of beneficiaries. Cyclical analysis of the satisfaction level helps to find many solutions and makes it possible to take actions leading to the constant improvement of medical healthcare.

Conclusion

The epidemic situation in most aspects of care did not reduce the level of patient satisfaction with medical services. Over 90% of patients expressed their contentment in hospital care. The biggest dissatisfaction of hospitalized patients during the COVID-19 pandemic involved certain restrictions on visitations and using pastoral services.

The high level of satisfaction of patients staying in the hospital during the pandemic applied to the widely understood medical and nursing care as well as sanitary conditions in wards, especially the cleanness of rooms, bed linens and sanitary facilities.

The Periodic assessment system outlining patients' satisfaction with medical services makes it possible to identify patients' needs, and enables performing detailed analysis as well as quick response to any imperfections. It is essential for succeeding in obtaining high-quality healthcare.

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Declarations

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Author contributions

Conceptualization, R.W. and A.A.; Methodology, A.A. and E.G.; Validation, A.A., E.G. and R.W.; Formal Analysis, R.W.; Investigation, E.G. and A.A.; Resources, E.G.; Data Curation, E.G.; Writing – Original Draft Preparation, R.W. and A.A.; Writing – Review & Editing, A.A.; Visualization, A.A.; Supervision, R.W. and E.G.; Project Administration, R.W.

Conflicts of interest

The authors declare no conflict of interest.

Data availability

The data that support the findings of this study are available from Masovian Specialist Hospital in Radom, but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. Data are however available from the authors upon reasonable request and with permission of the management board of the Masovian Specialist Hospital in Radom.

Ethics approval

The retrospective study for the period 2019–2021 was conducted after obtaining the consent of the Mazovian Specialistic Hospital Management in Radom (approval no. 338 of January 10, 2022).

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