



Evaluation of the impact of the transformation of a public hospital into a commercial company on the level of patient satisfaction with services provided

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Key words

hospital, company, transformation, medical services, health care system

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Introduction

In 1991, at the threshold of political transformations in Poland, there was born a concept of changes in organizational and legal form of public health care institutions. It concerned the conversion of institutions existing as budgetary units into independent ones, thus providing considerable independence in organizational and financial scope [1, 2]. Systemic changes in health care institutions were aimed at the introduction of market mechanisms to the Polish health care system, such as executive management of medical facilities or contracting of medical services. Independent public health care institutions are the classic type of a legal person, without any equivalent in other economy sectors or public services in Europe [3, 4, 5]. It turned out that despite the fact that according to the idea they were to carry out an independent economic policy, they are still dependent on many factors and conditions that diverge from market rules. The result is an unfavorable financial situation of many independent health care institutions that operate at a loss, failure of corrective actions

and organization of health care, which is not subject to any clear economical rules. Hence, there was developed an idea aimed at meeting conditions to achieve profitability thresholds and systemic transformations involving the liquidation of independent public health care institutions and simultaneous appointment of a new entity which is a commercial company, subject to the provision of health services for both insured and commercial patients [6]. Legal possibility of hospital operation in this form was granted by the provision of the Act of 30 August 1991 on health care institutions (art. 8, par. 1, point 7) [7].

One of the hospitals that were transformed into commercial companies, followed by the decision of the founding body, is „Health Care Institution in Tomaszow” (Tomaszowskie Centrum Zdrowia). The hospital is located in Tomaszow Mazowiecki, a city of approximately 65 thousand inhabitants, situated in central Poland, in Lodz voivodship. Lodz voivodship is for many years characterized by an unfavorable demographic structure. The percentage of people aged 65 years and more exceeded the threshold of old age and in 2013 amounted to 16.1% (in Poland it was 14.8%) [8]. In addition, in Lodz voivodship there appears the worst level of epidemiological indicators of health in Poland, such as average life expectancy and years of life lost due to premature mortality [9, 10, 11, 12]. This raises the need to develop early diagnosis and impatient care, mainly long-term, localized in the regions with the highest density of population – including Tomaszow Mazowiecki. In the face of this situation, it is also necessary to provide easy access to specialist clinics and patient services at the highest possible level.

The quality of medical and non-medical services provided in health care institutions, as well as the level of patient satisfaction with these services is the subject of research in many fields of science [13]. Each facility focused on improving the quality of patient care can be seen as a caring and patient-friendly organization, but it does not need to be associated with simultaneous high competence assessment. This mean that the goal of health care institutions shall be striving not only to improve the quality of services, but to make use of a two-dimensional concept of the technical and functional quality, popular in the health care [14, 15]. Technical quality is understood as the compliance with standards and technical requirements for the medical services, concerning technology, medical standards, equipment and competences of the medical staff. In contrast,

the functional quality is a relative assessment of the patient, which evaluates the quality of services by subjective feelings about the behaviors of medical and non-medical staff, whom he/she is in contact with during the stay in the facility. Surveys of patients are therefore an extremely important verifier of the operation of a medical facility.

The purpose of this work is the evaluation of the impact of the transformation of the city hospital in Tomaszow Mazowiecki into a commercial company on the level of patient satisfaction with medical and non-medical services provided.

Material and methods

Research was conducted in an city hospital in Tomaszow Mazowiecki that in 2009, based on the resolution of the District Council, was transformed from the public hospital into the Private Health Care Institution - „Health Care Institution Limited Liability Company in Tomaszow (Tomaszowskie Centrum Zdrowia) with 100% interest of the district of Tomaszow. Noteworthy is the fact that the hospital was subject to such change as the first in Lodz voivodship and one of the first in Poland (transformed under the program titled „Support of local government units in the activities that stabilize the health care system”). The principal consumer of services provided in this medical institution is the society of Tomaszow Mazowiecki and the District of Tomaszow; and additionally the market of activities of the company are residents of neighboring counties, for which the health care in Tomaszow is a natural addition. The survey was filled by 5494 patients, including 2701 (49.2%) before the transformation and 2793 (50.8%) after the transformation of the hospital into the commercial company.

The research tool was a questionnaire of the survey of own authorship, consisting of two parts. The first included information on socio-demographic characteristics of a person participating in the survey, while the second one assessed the quality of medical and nonmedical services provided to the patient during the hospital stay. The evaluation was made on a scale from 2 (negative) to 5 (very good). The survey was anonymous and voluntary.

Statistical analysis was based on methods of descriptive statistics – there were calculated arithmetic means and standard deviations for the ratings given by patients on the medical and non-medical services listed

in the survey. The statistical significance of differences in mean ratings of each service, before and after the transformation of the hospital into the commercial company, was investigated using U Mann-Whitney test.

Results

Time of settling formalities related to hospital admission was assessed by 1/3 of patients making the survey before the transmission of the hospital into the commercial company as negative, giving the grade 2; after the transmission, the percentage of such assessment was 8.7 (Figure 1). Very good grade (5) for this question was given by 1.2% of patients before the transformation and 44.5% of patients after the transformation of the hospital (Figure 2). The average rating was 2.80 and 4.13, respectively ($p < 0.001$) (Table 1). Equally high differences concerned the question evaluating the waiting time for bed. Before the transmission of the hospital, the average rating was 2.76, and after the transmission it was 4.56 ($p < 0.001$).

The question of cleanliness in wards and their equipment was responded negatively by almost a quarter of patients (23.2%) before the transmission of the hospital, and a very good grade was given by only 1.1% of patients. After the transmission these percentages were respectively 2.9 and 48.1. The average rating for this question was 2.86 before and 4.30 after the transmission ($p < 0.001$).

The survey included three questions about the kindness of auxiliary, nursing and medical staff. In all cases, higher rates were obtained after the transformation of the hospital. Very good grade for this question was given by 59.4% of patients in relation to the auxiliary staff, 70.8% for the nursing staff and 65.6% for the medical staff. In the surveys filled by patients admitted to the hospital before the transmission, these percentages were respectively: 0.3, 2.2 and 2.3. Patients also had the opportunity to evaluate the availability of doctors and the information obtained from the medical staff. In these categories there was also a significant improvement in the assessment of patients. Before the transmission the average rating was 2.92 and 2.90, after the transmission it was 4.39 and 4.38 ($p < 0.001$). In relation to the nursing staff, there was evaluated the assistance during skin care treatments and the professionalism in the performance of medical procedures. In both aspects, the average rating significantly increased after the transformation of the hospital - in the

first question from 2.88 to 4.63, and in the second from 3.23 to 4.69 ($p < 0.001$).

Slightly smaller differences relate to ratings given before and after the transformation of the hospital, concerning the quality of hospital meals. The average rating of patients increased from 3.25 to 3.68 ($p < 0.001$). Very good grade was given by 27.43% of the respondents, and a similar percentage of the respondents (27.28%) assessed them negatively.

The survey also allowed patients to assess non-medical services, such as the possibility of visits in the hospital, the use of hospital parking, as well as the availability of the buffet and hospital shop. Also in this range the assessments of patients increased after the transformation of the hospital. Very good grade before the transmission was given, respectively, by 4.81, 2.22 and 4.92, and after the transmission these percentages amounted to: 63.8%, 25.71% and 36.59%.

In terms of operations finishing the hospital stay – i.e. information concerning the discharge from the department, waiting time for the discharge and information on possible further treatment provided by a doctor, the patient assessment has significantly improved. Before the transmission of the hospital, the average rating concerning the above-mentioned activities fluctuated around 3.0 (2.93, 2.87, 3.02), and after the transformation it has exceeded 4.0 (4.41, 4.29, 4.45).

Discussion

Health economics is a relatively young area. It is considered to be originated in 1963 in the U.S. by the article of K.J. Arrowe [16]. In France, this area was originated by Ch. Phelps, who believed that there is no difference between the manufacture of a car and the production of health, as in both cases it is about the combination of factors of production in order to manufacture a product, which in the case of the hospital will be health. Production factors will include: staff, knowledge, technology, patients, procedures, organization, diagnostic and therapeutic instruments, wards, medicines, logistics and financial resources [17]. F. Djellal claimed that it can be assumed that the marginal productivity of medical care is positive, that is, the increase in spending on health care causes quicker restoration of patient health [18]. Medical care is actually made up of a large number of variables and their mutual analysis is a factor enabling

the identification of problems faced by the facility, as well as the implementation of appropriate solutions.

Polish market of medical services undergoes a rapid transformation, from the system in which the owner and the manager were the state into the system in which there operates a number of suppliers with legitimate co-financing of services [10, 20, 21]. The basis for the process of changes occurring in the hospital in Tomaszow Mazowiecki was primarily the stabilization of the economic and organizational situation of the facility through actions conditioning the achievement of profitability thresholds of the hospital and specialist clinics. The proposed actions, involving the clearing of debts of the unit by the transformation into the commercial company and the acquisition of debts by the founding body were correlated with the program for the rationalization of the operating costs. Commercialization of medical services was focused on the growth of home equity viability, which is necessary to meet the expectations of investors, concerning the increase in the value of the newly formed company.

Corrective actions implemented in health care institutions, including Health Care Centre in Tomaszow Mazowiecki, are usually focused on economic issues, but solving the financial problems of facilities also gives a measurable effect in the form of the improvement of patient satisfaction with the services provided. Such measures shall be based on internal and environmental analyses and remain consistent with the state health policy, which is set out in the Strategy for Health [22].

A prerequisite for achieving patient satisfaction is the technical quality. But this is not, however, a sufficient condition, and at the same time it is extremely difficult to assess. If the staff behavior is unsatisfactory for the patient, he/she is generally unhappy, regardless of the technical quality of the service provided. The functional quality is an additional benefit for the patient and in the case of similar technical level of the services provided it becomes the best way to compete with other health care institutions. Gronroos distinguished two dimensions of qualitative approach to medical services. Each of them is relatively independent, yet complementary to each other [23]. The division of patients into groups of those who depend only on medical knowledge of the staff and those who care mainly about interpersonal skills of the staff with little medical knowledge. The patient will, however, be satisfied with the medical

service only when there is harmony between these elements. But there is no canon of elements that would be suitable for each kind of medical service. Therefore, we need to perform a detailed analysis of specific medical services in order to identify those elements that determine its quality. The starting point of this analysis is to distinguish elements relevant to the patient. Thus, patient subjective assessment is a vital element, aimed at improving the quality of medical services provided. On the basis of research conducted by Parasuraman et. al, the criteria for the quality assessment made by the customer include: material components of the service process, reliability and trustworthiness, competences and confidence, responsibility and responsiveness, as well as empathy [24]. However, due to the nature of medical services, because of the lack of medical knowledge patients do not have an adequate opportunity to assess the technical quality of services. Therefore, they shape their opinions on the quality of medical services on the basis of a subjective assessment of the functional quality, which includes the affordability and ease of contact with the service provider, transfer of information in a language which he understands, as well as the ability to identify with the patient and listen to him/her. According to Withers and Viperman, patient satisfaction with medical care involves the transfer of positive information on the services to five persons met. In the case of disappointment, an unfavorable opinion reaches up to 15–19 persons [25].

In accordance with the recommendations of the World Health Organization, all aspects of medical services shall be regularly monitored [26, 27]. The evaluation of patients' opinion enables the assessment of sensitivity of health care systems to the needs of service providers. It also allows the identification of patients' expectations and reasons for the lack of satisfaction with the services received. This makes it possible to implement corrective measures aimed at improving the quality of medical services, and thus increasing the level of patient satisfaction [28, 29].

Conclusions

Assessments of patients in relation to the services provided have significantly increased after the transformation of the city hospital in Tomaszów Mazowiecki into the commercial company. Increase in patient satisfaction applies to all medical and non-medical services questioned in the survey. The highest increase (over 50%) relates to the average rating

of the waiting time for bed, information given to patients, assistance of the nursing staff during skin care treatments and eating meals, courtesy of the auxiliary staff, cleanliness of wards, as well as the accessibility to the doctor. The smallest differences (increase of less than 20%) related to the possibility of using the hospital parking, as well as the quality and temperature of meals served in the hospital.

The results obtained on the basis of the conducted research shall be an argument in the debate on the merits of ownership transformations in health care in Poland. Such activities allow the acquisition of strategic partners which can help the company in the development of the market of services provided, and as a result may help to improve their quality, and to ensure health safety in local communities.

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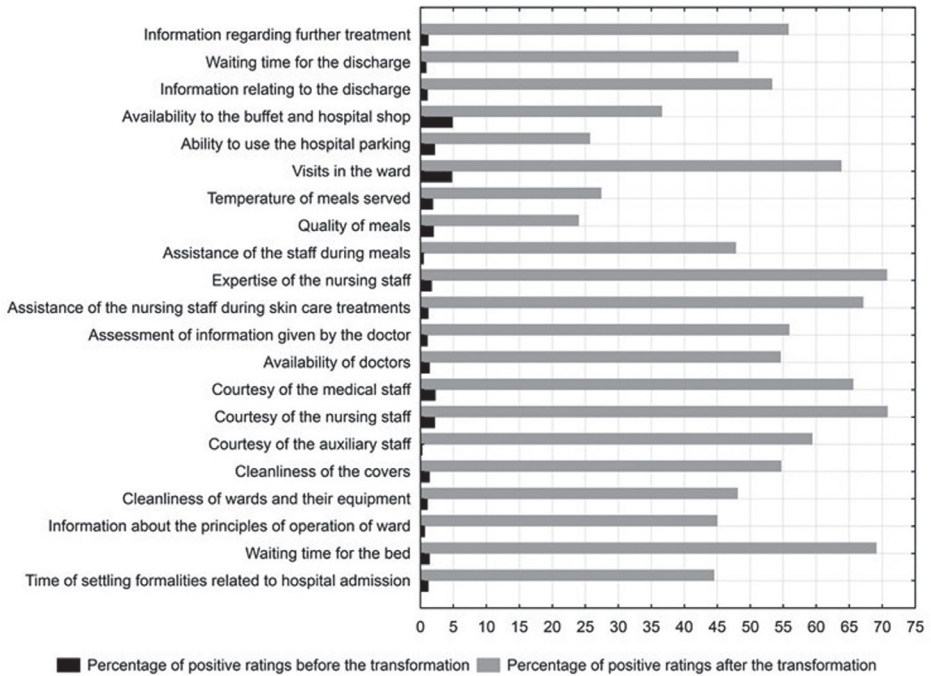


Figure 1. Percentage of negative ratings before and after the transformation of the city hospital in Tomaszow Mazowiecki into the commercial company

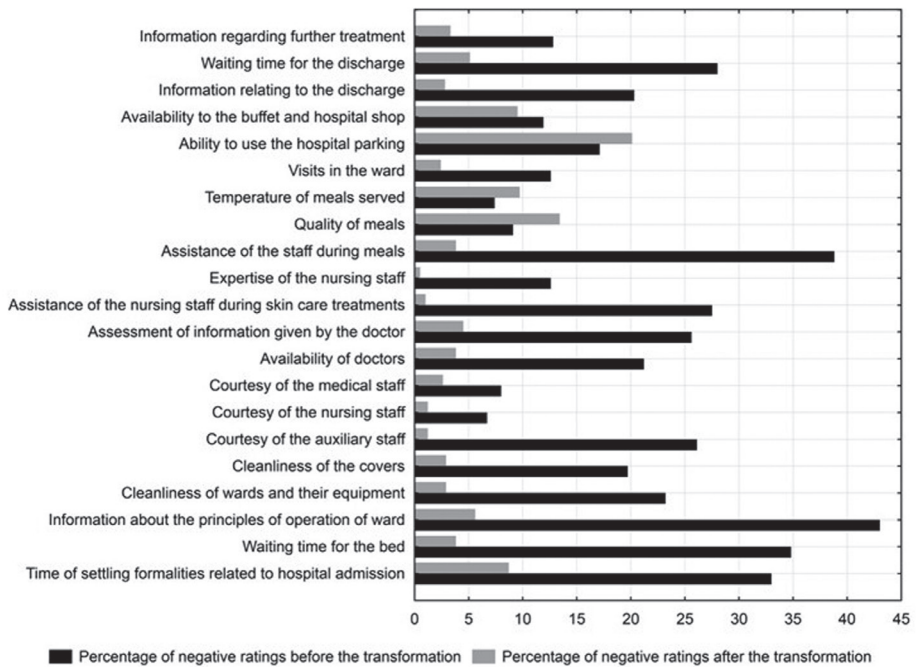


Figure 2. Percentage of very good ratings before and after the transformation of the city hospital in Tomaszow Mazowiecki into the commercial company

Table 1: Average ratings of medical and nonmedical services provided by the hospital before and after the transformation of the city hospital in Tomaszow Mazowiecki into the commercial company

Evaluation subject	Before the transformation		After the transformation	
	average	stand. dev.	average	stand. dev.
Time of settling formalities related to hospital admission	2.80	0.67	4.13	0.97
Waiting time for the bed	2.76	0.65	4.56	0.77
Information about the schedule of the day and the principles of operation of the ward	2.61	0.58	4.24	0.89
Cleanliness of wards and their equipment	2.86	0.57	4.30	0.80
Cleanliness of the covers	3.00	0.65	4.37	0.80
Courtesy of the auxiliary staff	2.82	0.56	4.52	0.66
Courtesy of the nursing staff	3.26	0.61	4.65	0.61
Courtesy of the medical staff	3.21	0.61	4.55	0.72
Availability of doctors	2.92	0.61	4.39	0.81
Assessment of information given by the doctor	2.90	0.65	4.38	0.84
Assistance of the nursing staff during skin care treatments	2.88	0.66	4.63	0.63
Expertise of the nursing staff	3.23	0.68	4.69	0.55
Assistance of the staff during meals	2.72	0.65	4.39	0.83
Quality of meals	3.25	0.64	3.68	0.99
Temperature of meals served	3.28	0.62	3.80	0.96
Visits in the ward	3.22	0.72	4.55	0.72
Ability to use the hospital parking	3.10	0.69	3.61	1.18
Availability to the buffet and hospital shop	3.31	0.74	4.05	1.00
Information relating to the discharge	2.93	0.59	4.41	0.79
Waiting time for the discharge	2.87	0.65	4.29	0.89
Information regarding further treatment given by the doctor	3.02	0.55	4.45	0.80

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