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Challenges to Performance Management in Health Care Entities During Crisis Situations

Abstract

Objectives: The article aims to identify the challenges faced by the management of health care entities – clinical hospitals – in evaluating their performance during crises. The research hypothesis posits that crises add new areas to the performance evaluation of health care entities – clinical hospitals – and alter their evaluation tools.

Research Design & Methods: The research was empirical, based on the reporting data for the period 2019–2021 (quantitative and qualitative) in selected clinical hospitals. The analyses were performed by an expert and included the perspective of a certified auditor and long-term researcher of issues related to the operation of health care entities – hospitals.

Findings: Health care entities in Poland, as public sector entities, incorporate crisis management requirements into their activities.

Implications / Recommendations: The results of the analyses are addressed mainly to the constituent bodies of health care entities, institutions affecting the operation of the health care system, and hospital managers.

Contribution / Value Added: It has been shown that crises add new areas to the performance evaluation of health care entities – clinical hospitals – and alter their evaluation tools.

Keywords: crisis management in hospitals, performance management in health care entities.

Article Classification: research article

JEL classification: M40, M41, L21

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Introduction

Health care entities in Poland act as providers of medical services. Public entities typically operate as independent public health care institutions. Health care entities have certain characteristics that distinguish them from other business entities, e.g.:

a) their activity is heavily regulated;
b) they employ highly-qualified health care professionals;
c) their operation is not for profit;
d) they lack incentives to identify and improve their effectiveness;
e) they have limited potential for conducting financial analyses of their operation;
f) their activity is publicly funded.

Hospitals are those institutions of the health care system which have a crucial role to play during crisis situations such as pandemics. For the present research, clinical hospitals have been chosen. In addition to providing health care services to patients, such institutions:

a) engage in teaching and research activities;
b) train medical personnel;
c) perform health-related tasks and programmes;
d) discharge tasks commissioned by entities from other sectors;
e) offer consultations and opinions for other entities;
f) perform tasks related to the national defence.

The above characteristics make these institutions indispensable for the proper operation of the whole health care system. Since the trends observed in clinical hospitals epitomise the trends across the whole health care sector, the conclusions from their analyses can also be transposed onto other health care institutions.

The aim of this paper is to identify the challenges faced by the management of health care entities – clinical hospitals – in the evaluation of their performance during crisis situations. The formulated research hypothesis states that crisis situations open up new areas within their performance evaluation system and alter the tools used in such evaluation processes. The applied research tools include an analysis of the literature of the subject, relevant legislation, and financial statements of selected 10 clinical hospitals for the years 2019–2021.

Clinical hospitals as objects of performance evaluation – a literature review

Clinical hospitals obtain funding for their operation mainly from public funds (health insurance contributions), under contracts with the National Health Fund [Narodowy Fundusz Zdrowia – NFZ]. They derive other funds from sources such as:

a) the provision of paid medical services;
b) business activities;
c) donations, legacies, bequests;
d) the provision of health programmes financed from sources other than public;
e) receiving co-financing for the training of medical personnel;
f) grants and other funds from the European Union

How health care entities – clinical hospitals – are managed ought to take into account both their legal status, their nature of their activities, and their sources of financing. The prevalent legal status of clinical hospitals, i.e. that of independent public health care institutions, means that their

founding bodies are the main stakeholders, concerned with their performance. Patients who expect health care services to be effectively discharged are another group interested in a smooth operation of these entities. The remaining stakeholders are other addressees of information generated by the key operational areas of clinical hospitals.

Due to their specific nature of operation, an integrated, holistic approach to management is of cardinal importance. Performance management tools take into account both various aspects of the evaluation's scope (specific areas within the entity, the entity as a whole) and competencies of the staff.

The application of performance management tools in health care entities has been discussed by researchers both in Poland and abroad. Selected areas of their uses in the health care sector are summarised in Table 1.

Management-related issues on the evolution and diffusion of the performance management concept are tackled in the paper by Czekaj and Ziębicki. The authors emphasise that PM, a concept frequently associated with financial or human resources management, has seen dynamic growth in the last two decades.

In the recent years, there have been many attempts at the adaptation of state-of-the-art activities to support business decisions through the application of information technologies known as Business Intelligence. One common feature of the concept is management based on performance monitoring (Czekaj & Ziębicki, 2014, p. 11). The paper presents theoretical deliberations whereby the authors underline the concept of performance management, which largely focuses on the level of the organisation as such, and summarise its evolution. The authors make their analysis on the basis of secondary research on performance management in organisations operating in the United Kingdom, the USA, China, Japan, and Australia.

Based on their research, the authors formulated the following conclusions:

a) performance evaluation suggests the prevalence of operational, and not strategic perspective;
b) the measurement typically employs financial indicators;
c) higher-level managers are the main addressees of the evaluations;
d) the evaluation process makes little use of the IT infrastructure;
e) the awareness of benefits derived from the implementation of performance management is low.

In their analyses, Czekaj and Ziębicki also presented the findings from their own research of enterprises operating in Poland (both with foreign and Polish shareholdings). The findings from Poland were largely consistent with those obtained elsewhere (in five selected countries). Based on their research, the authors concluded that:

a) the management process often made use of performance evaluation;
b) the evaluation showed considerable dispersion;
c) the prevalent evaluation perspective was focused on the operational side and typically employed financial measures;
d) top managers were the main addressees of the analyses;
e) spreadsheets and ERP were used as supplementary evaluation tools;

Balanced Scorecard (BSC) and Activity-Based Costing (ABC) were the tools typically applied in the decision-making processes (Czekaj & Ziębicki, 2014, pp. 17–21).

Although Czekaj and Ziębicki pursued their research in commercial enterprises, they believe that research can also be conducted in public sector and non-profit organisations, provided that their specific characteristics are taken into account. This can be attributed to the growing interest in the performance management concept, its viability, and its holistic approach. As is demonstrated

Table 1. The applications of performance management tools in the health care sector

The applications of performance management tools	Comments and conclusions
P. Mućko and S. Hońko (2014), *Specyfika zrównoważonej karty dokonań w podmiotach leczniczych* [Characteristics of the Balanced Scorecard in healthcare entities]	
The article analyses the conclusions drawn from some examples of BSC uses in the operation of health care entities described in the literature regarding the scorecard's basic elements, i.e. dimensions of performance measurement. Special attention was paid to the sequence of financial and customer perspectives at health care entities and their modifications in specific practical applications.	The authors point out that the application of the BSC in healthcare entities "helps translate strategies into actions, identify persons and units responsible for their completion, and communicate with lower-level managers and employees".
M. A. Jaworzyńska (2015), *Zastosowanie Strategicznej Karty Wyników w szpitalu – studium przypadku* [Applications of the Strategic Balanced Scorecard in hospitals – a case study]	
The aim of the paper was to design a Balanced Scorecard for the Independent Public Healthcare Institution in Puławy.	The author claims that the BSC offers a comprehensive picture of the entity's effectiveness as it integrates both financial and non-financial information. However, the system for performance management should only be regarded as a means to an end, i.e. a system of financial planning that facilitates strategy execution and enables monitoring the progress in its implementation.
M. Kludacz (2014), *Zasady i etapy rachunku kosztów działań w angielskich szpitalach na potrzeby wyceny świadczeń zdrowotnych* [Principles and stages of activity-based costing for the pricing of healthcare services in English hospitals]	
The paper outlines the principles of cost accounting used in English hospitals and describes how they are put to practice. Special attention is paid to those cost accounting components which most strongly affect the assessment of treatment costs for individual patients.	The author concludes that the cost accounting principles that are currently followed in English hospitals should not be regarded as models for any Polish solutions in that sphere. She points out, however, that such solutions, just as those applied in England, ought to be the same for all hospitals and based on such a form of activity-based costing that is regarded as the most adequate for calculating the costs of medical services.
J. Chluska (2007), *Determinanty wprowadzenia rachunku kosztów działań w szpitalu* [Determinants of introducing activity-based costing in hospitals]	
The author discusses the conditions of, and opportunities for, calculations using activity-based costing as a tool to determine unit costs. Such costing can be regarded as an alternative to other methods of calculating the costs of health care services in hospitals.	The author demonstrates that such considerations as the lack of clear demand and supply sides, non-sovereign consumers, limited competition, and absence of stimuli to boost effectiveness make it difficult to evaluate performance and improve it at the individual levels of the health care system. All this is not without impact on the structure of cost accounting, cost information, and change trends even at its lowest level, i.e. hospitals.
M. Hass-Symotiuk (Ed.) (2010), *Koncepcja sprawozdawczości szpitali na potrzeby zintegrowanego systemu oceny dokonań* [The concept of hospital reporting for an integrated performance management system]	
The paper aims to identify sets of economic and medical information needed for an integrated performance management system for public hospitals using selected categories of measures and indicators.	Importantly, the project: – defined the key areas and perspectives for measuring hospital performance; – designed a BSC model aimed at improving management processes both within individual hospitals and in the whole health care system (by connecting the areas, perspectives, and measures while taking into account the goals set in individual areas for specific shareholders).

The applications of performance management tools	Comments and conclusions
S. Ostrowska (2013), *Zmiana w zorientowanej na misję karcie wyników (MSC) i jej wpływ na zachowanie członków organizacji publicznej* [Modifications of a Mission-Oriented Scorecard (MSC) and their impact on the activities of public organisation members]	
The author presents the implementation principles of the Mission-Oriented Scorecard in health care entities.	Among the functions of performance measurements in the MSC, the author stresses inspections, the improvement of results, and motivation (p. 237).
W. N. Zelman, G. H. Pink, and C. B. Matthias (2003), *Use of the Balanced Scorecard in Health Care*	
The paper reviews the application of the Balanced Scorecard in the health care system.	The authors point out that although the BSC is a useful tool in managing health care entities, it needs to address the sectoral and organisational conditions. It is used not only in strategic management, and requires modifications aimed at including some non-physical perspectives such as the quality of care, access to health care services, and effects of the activities.
T. Mettler and P. Rohner (2009), *Performance Management in Health Care: The Past, the Present, and the Future*	
The authors analyse the *status quo* and development prospects of performance management (PM) in health care entities, and summarise their research in that area.	The authors emphasise that using PM in the operational practices of health care entities depends on their regulatory environment, new technologies, strategic goals, organisational structure, and employee attitudes. They conclude that for a future development of PM, it is necessary to prioritise the areas in which the concept could be applied (roadmap).
F. Betto, A. Sardi, P. Garengo, and E. Sorano (2022), *The Evolution of Balanced Scorecard in Healthcare: A Systematic Review of Its Design, Implementation, Use, and Review*	
The authors analyse the evolution of BSC uses in health care organisations in the recent years, specifically during the COVID-19 pandemic.	The authors indicate that the financial perspective is preferred for an effective and efficient use of the BSC in health care entities. Empirical research suggests cost-based financial indicators such as costs of medicines and materials, costs of training, general system and organisation costs, expenditures, revenues, efficiency, productivity, and some other indicators such as liquidity, accessibility, and profitability.

Source: Own elaboration based on the literature of the subject.

by the literature review, performance management tools are currently used in the analyses of decision-making processes in health care entities.

Crisis management in health care entities

Crisis situations can occur in any economic entity. As Walas-Trębacz and Sołtysik point out, the managers in an enterprise affected by a crisis event need to determine whether they deal with a crisis situation or a crisis of the organisation (Walas-Trębacz & Sołtysik, 2014, p. 86). A crisis situation means that certain preventive measures can be undertaken and crises can be prepared for. According to Zelek (2003, p. 25), a crisis means the consequence of disruptions in one or several factors dependent on the quality of management, whether external or internal, that determine the very existence and development of a given entity.

Certain specialist papers and legislative acts (Davoli, 2007; Act of 26th April, 2007) emphasise the need to prepare organisations for potential crisis situations caused by pandemics or other crises in health care entities. The Act of 26th April, 2007, on Crisis Management defines a crisis situation as "a situation which negatively affects the safety of individuals, property of significant

size or the environment, which leads to severe restrictions in the operation of the relevant public administration bodies due to an inadequate nature of their means and measures" (Act of 26th April, 2007, Art. 3). This applies, among others, to health care. Although the legal arrangements encompass the entire crisis management system, health care entities represent its major constituent. Such a crisis situation occurred during the COVID-19 pandemic.

The challenges that the managers of health care entities had then to grapple with stemmed from such crisis conditions as (Buchelt & Kowalska-Bobko, 2020, p. 24):

a) the need to hospitalise many patients at the same time;
b) shortages of staff, materials, and equipment;
c) the absences of medical and non-medical personnel;
d) increased number of deaths as well as logistic problems with transport and supplies;
e) financial and organisational problems.

Given the relevant legislation and literature of the subject, the tasks of the management can be formulated in such areas as:

a) preparing for the potential crisis situations;
b) activities during combatting the consequences of crisis situations;
c) alleviating the economic consequences once the crisis situation is over in order to return onto the planned development path[1].

All these stages can be incorporated into the organisation of in-house crisis management systems, which, given the present turbulent times, ought to be regarded as a *sine qua non* arrangement. As a minimum, such systems ought to include:

a) operational plans of the health care entity which take into account the applicable macroeconomic regulations governing specific solutions and activities aimed at combatting the consequences of crisis situations;
b) structures and resources needed for the implementation of the entity's tasks;
c) information and communication systems;
d) decision-making processes and arrangements stipulated for emergency situations and unexpected disruptions in the discharge of the entity's tasks[2].

Research suggests that the initial preparatory stage concerning the activities to enable combatting the consequences of crisis situations can account for as much as 85% of all undertaken activities (Walas-Trębacz & Sołtysik, 2014, p. 92).

Crisis situations not only affect the organisation's day-to-day operation but can also lead to its own crisis and jeopardise its very existence. This is reflected in the entity's deteriorated economic and financial situation compared to the period prior to the COVID-19 pandemic. Walas-Trębacz and Sołtysik proposed an interesting specification of tools and methods that can be used in the designing of a crisis management system; it is summarised in Table 2.

The methods listed above demonstrate that crisis management systems are elements of the entity's management processes and can significantly complement the internal management systems. Many of them are essential tools used by health care entities in their operational and strategic management.

[1] The authors distinguish the following stages of the crisis management process as: preparation, prevention, response, and restoration (Walas-Trębacz & Sołtysik, 2014, p. 92)

[2] For more on the role of hospital staff in crisis management during pandemics, see: Chluska, 2022.

Table 2. Methods used in designing a crisis management system

Stages and activities of the crisis management process	Methods applied
Crisis identification and analysis – identifying the source of the crisis; – determining the factors leading to the crisis; – analysing the impact of such factors on the organisation; – assessing potential consequences; – evaluating the likelihood of a similar situation being repeated in the future.	– simulations; – scenarios; – forecasts; – decision trees; – SWOT analysis; – profile analysis; – catalogue of risk factors; – descriptive risk evaluation.
The evaluation of the crisis situation – quantitative analysis of the crisis factors; – qualitative analysis of the crisis factors.	– risk matrix; – preference ranking analysis; – ratio analysis; – stakeholder analysis.
Crisis management – identifying priorities; – selecting methods to curb or eliminate crisis situation factors; – identifying supplementary actions.	– reducing higher-risk activities; – increasing precautionary measures; – stakeholder analysis; – simulations; – forecasts; – restructuring; – turnaround; – lean management; – outsourcing; – balanced scorecard.
Controlling and monitoring – analysing and evaluating the undertaken activities; – monitoring the changes (within and outside the organisation); – improving the crisis management process; – responding to changes which take place and were not identified in the initial stage of the process.	– controlling; – audit auditing; – early warning systems; – ratio analysis; – balanced scorecard; – IT methods.

Source: Own elaboration based on: Walas-Trębacz & Sołtysik, 2014, p. 91.

Crisis management and performance evaluation of health care entities – research methods and findings

The research focused on clinical hospitals. The Polish "Register of Healthcare Entities" lists 32 such hospitals. Clinical hospitals can be established by medical universities or local governments[3]. The research comprised 10 hospitals for which complete financial data in the form of financial statements (profit and loss accounts in particular) and descriptive additional information for 2019–2021 could be obtained, alongside reports on their economic and financial situation.

The research process comprised the following stages:

1) analysing the legislation governing the operation of hospitals, including financing their activities during pandemics;
2) identifying the management principles relating to health care entities (literature review, review of clinical hospitals' websites, synthesis);

[3] For instance, the St. Jadwiga Queen of Poland Clinical Provincial Hospital No. 2 in Rzeszów.

3) obtaining financial statements information from the National Court Register as well as reports on the economic and financial situation;
4) identifying and comparing selected data on the financial activities of clinical hospitals in the researched period;
5) applying selected economic and financial measures as well as expert analysis of the data relationships from financial statements;
6) conclusions from the research.

In the period under scrutiny, the analysed hospitals achieved different financial results, mostly in consequence of the COVID-19 pandemic in 2020. In the remaining two years, the treatment of COVID-19 patients was provided during a part of the financial year. What 2020 and 2021 had in common was partial resignation from performing planned procedures to allow treatment of COVID-19 patients; such procedures were postponed to the following years. The fund provider (National Health Fund) remitted the advance payments for the concluded contracts, to settle them in full in the subsequent years. Such an arrangement helped improve the hospitals' liquidity. The financial results of the analysed hospitals are shown in Table 3.

Table 3. The financial results of the analysed hospitals in 2019–2021

	Year	Number of hospitals with a financial result	
		Net profit	Net loss
1	2021	6	4
2	2020	4	6
3	2019	2	8

Source: Own elaboration based on financial statements.

In 2020, two of the analysed hospitals produced a positive financial result and recorded a loss in 2019. This means that they were able to improve their finances despite a crisis situation. Operational costs proved to be a parameter which had a significant bearing on the financial result achieved during the pandemic, unlike revenues, which largely depended on the fund provider (NFZ) and legislation adopted for the health care sector for the pandemic period[4].

The operating costs of health care entities focusing on the treatment of COVID-19 patients were similar in many hospitals and depended on the number of admitted patients, their medical characteristics, and prices of materials and other resources used during treatment. Changes in the costs of the analysed clinical hospitals are shown in Table 4.

The financial data suggests that the costs increased differently from hospital to hospital, and grew by 5%–31% in 2020, i.e. the most testing year of the COVID-19 pandemic. In turn, the period of gradual overcoming the crisis and resuming the provision of planned medical procedures saw the costs increase by 17%–40%, as compared to 23%–74% for the services provided throughout the entire period of the COVID-19 pandemic.

In-depth analyses of the financial and non-financial data of selected hospital no. 6 were made to identify the detailed factors underpinning the cost relationships. The analysis of the financial

[4] Such special sources of funding include the financing of doctors' and nurses' costs of labour, hospital supplies and equipment, donations, and other forms of financial support.

statements were accompanied by an examination of the reports on the entity's economic and financial situation. The following financial ratios were selected:

– liquidity ratios (current and quick);
– debt to asset ratios;
– return on sales (return on operations)[5].

Table 4. Changes in operating costs of analysed clinical hospitals

Hospital/ year	2021 (in thousand PLN)	2020 (in thousand PLN)	2019 (in thousand PLN)	2021/2020 (%)	2020/2019 (%)	2021/2019 (%)
1	214 821	162 912	132 677	132	123	162
2	136 803	107 948	96 608	127	112	142
3	811 351	667 908	587 430	121	114	138
4	905 578	681 137	520 841	133	131	174
5	713 393	557 697	510 028	128	109	140
6	353 262	252 775	221 838	140	114	159
7	268 050	225 804	206 479	119	109	130
8	204 171	174 717	165 882	117	105	123
9	410 995	305 167	288 391	135	106	143
10	418 375	351 466	317 030	119	111	132

Source: Own elaboration based on the hospitals' financial statements.

These ratios were used by the team led by Hass-Symotiuk as the financial measures representing the hospital's (micro) perspective in the draft BSC model for the needs of an integrated performance evaluation system (Hass-Symotiuk, 2010, p. 235). They are also listed in the secondary legislation to the Act on Healthcare Services, i.e. Regulation of the Health Minister of 12th April, 2017, on economic and financial factors needed to make analyses and forecasts concerning the economic and financial situation of independent public health care institutions.

Tables 5 and 6 show a comparison of the planned and actual values of these ratios, as communicated by the analysed hospital.

Table 5. The liquidity ratios of the selected hospital

Year	Plan	Execution	Plan	Execution
	Current liquidity ratio (%)		Quick liquidity ratio (%)	
2021	0.45	0.58	0.34	0.40
2020	0.42	0.58	0.31	0.41
2019	–	0.56	–	0.45

Source: Own elaboration based on the selected hospitals' economic and financial reports.

[5] The return on operations ratio includes other operating income, since the donations of current assets received during that period were reported as other operating income. The relevant calculations were based on the guidelines set in the Regulation of 12th April, 2017.

Although the analysed hospital reported an unsatisfactory yet stable liquidity level (score of 0 in the economic and financial report for 2020), the financial forecasts published in the reports were largely consistent with the actual results. What is more, the ratios' values were even slightly better, which can be viewed as proof of effective management, also in the time of crisis. The hospital management explained:

> *The hospital has taken a number of remedial measures to improve its liquidity. However, the ongoing pandemic, the decision of the provincial governor (*wojewoda*) to turn two of the hospital's branches into COVID-19 hospitals with a large number of additional beds, as well as having to provide the required COVID-19 protective equipment for the A&E unit in the main hospital branch… meant that huge costs had to be incurred from the hospital's own funds, among others in order to adapt the hospitals to the epidemiological requirements, such as partition walls, oxygen, personal protection equipment such as masks, gloves, goggles, etc. and to buy medical devices such as life-saving ventilators. Therefore, it was extremely difficult to improve liquidity in any significant way or to pay our liabilities faster.*

Table 6 shows that a similar stability was maintained in the case of the hospital's debt to asset and return on sales ratios.

Table 6. Debt to asset and return on sales ratios for selected hospital

Year	Plan	Execution	Plan	Execution
	Debt to asset ratio (%)		Return on sales (%)	
2021	52	53	1	1
2020	57	53	2	1
2019	–	64	–	1

Source: Own elaboration based on the selected hospitals' economic and financial reports.

The hospital in question turned a positive financial result in the three analysed periods. Achieving this was far from straightforward since, as the management claims,

The economic crisis caused by the COVID-19 pandemic adversely affected the financial situation of businesses both in Poland and abroad. However, health care institutions had protections guaranteed by the system, among others the NFZ's decisions to settle the contracts with health providers on a monthly basis, faster bank transfers for the performed medical procedures or extending the period for the settlement of the flat-rate funding until the end of 2021.

> In 2020, the analysed hospital obtained its funding from the contract with the NFZ (219 million PLN), subsidies (40 million PLN), and donations (417,000 PLN). Despite the challenging conditions, the hospital was able to fulfil the flat-rate funding in 86.38%. In response to the increased level of debt in 2021, the hospital reached settlements with contractors to pay its liabilities in instalments. Owing to such arrangements, the due payments were made according to the agreed schedules.

Conclusion

Crisis situations caused by the COVID-19 pandemic forced health care entities to engage in many activities aimed at alleviating the consequences of the crisis. An analysis of selected financial aspects of clinical hospitals suggests that although hospitals as entities with their own economies have made it through a challenging period, the consequences of their activities during

that time will be felt in the subsequent settlement periods. The conversion of hospitals into so-called "COVID-19 hospitals", governed by separate legislation, was accompanied by the provision of additional funds for salaries, subsidies, donations, and other forms of support. Another instrument that helped maintain financial stability was the disbursement of funds under the NFZ contracts in monthly instalments (as advance payments), with their settlement postponed until 2021.

Additional tasks imposed by the COVID-19 pandemic enabled hospitals to tap into their potential and identify new forms of financing their activity. Under regular conditions, the provision of extra health care services going beyond the scope of the contract concluded with the funding provider does not secure their financing (so-called services exceeding the contracted limits). Similarly, the analysed hospitals did not witness any significant deterioration in their financial result. This invites the question on the extent to which health care entities fulfil their potential, and whether there exist some untapped reserves in the system's resources. Such questions and concerns might provide a topic for analysis by decision-makers in the health care sector.

The COVID-19 pandemic posed a significant crisis for health care entities, whose managers were forced to discharge the daunting task of crisis management given the limited financial resources in the health care sector. This managing function had to address such challenges as:

a) securing additional sources for financing the increased range of medical services;
b) modifying the conditions in which their basic activity was to be pursued;
c) new areas and uncommon medical services;
d) the need for in-depth analyses of medical cases and cooperation with persons coordinating the fight against the COVID-19 pandemic.

The data suggests that the hospital managers had their ups and downs in coordinating the institution's activities. Nonetheless, some specific features of crisis management in hospitals could be observed:

a) the prevalence of short-term, activity-focused attitudes;
b) the modification of performance evaluation to take into account the special tasks discharged during the crisis;
c) the modification of the applied tools to stabilise liquidity and profitability;
d) the amendment of tasks from a strategic perspective.

There have been no changes in the legal tools and measures laid down in the Regulation of the Health Minister of 12th April, 2017, on economic and financial factors needed to make analyses and forecasts concerning the economic and financial situation of independent public health care institutions. Decision-makers in the health care sector will most likely include the pandemic emergencies in their evaluation of individual entities.

The objective of the article can be regarded as fulfilled, and its hypothesis has been proved correct. Health care entities have to factor in new challenges and crisis situations when designing in-house management systems, such as inflation, rising prices of resources, or the effects of the war in Ukraine. However, this involves different tasks than those discharged during the COVID-19 pandemic and other decision-making areas – and, therefore, requires different performance measures.

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