
Highlights of the rehabilitation activity of the hospitals for long-term treatment and rehabilitation – affiliates of the medical institute of the Ministry of the Interior – a means of achieving the goals

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Abstract

The purpose of the research is to study the rehabilitation activities of long-term treatment and rehabilitation hospitals in the branches of the Medical Institute of the Ministry of the Interior. The author's thesis is to prove the need for a mechanism to compensate for the defects of information asymmetry, the inelasticity of demand to minimize the high financial risk for the individual user, which leads to making correct management decisions. The current study of the activity in hospitals for long-term treatment and rehabilitation will determine the emphasis on the work and management of the MI-MI. The study proposes a mechanism to compensate for the defects of information asymmetry, demand inelasticity and high financial risk for the individual consumer. The study is a novelty from the rehabilitation activity of the long-term treatment and rehabilitation hospitals in the branch of the Medical Institute of the Ministry of the Interior. The study focused on a few rehabilitation hospitals without generalizing to the whole health system.

Key words: sanatorium treatment, healing activity, health service, management, quality of medical services.

Introduction

The processes of planning, organization and control of the resources of the MI-MI – a secondary authority with a budget, with included affiliates – a tertiary authority with a budget HLTR: city of Hisar, city of Varna and city of Bankya, define/separate the activities and emphasize on the essential ones with responsibility for collection of decisions to achieve the defined goals.

Material and methods

The object of the monitoring is the activities in HLTR – the city of Hisar, the city of Varna and the city of Bankya, affiliates of the Medical Institute of the Ministry of the Interior for the period 2017-2020. The quantitative and qualitative indicators for the three affiliates in general, as well as by affiliates, are set in the foreground.

Results

The comparative analysis of the main indicators of HLTR – affiliates of MI-MI for the period 2017-2020 show the highlights in the work of the management of MI-MI.

Theoretical and/or practical significance

In this context, this development summarizes some of the problematic activities in the stages/processes of the overall activity in the branches. These results and up-to-date information can serve to prioritize the emphasis in the work and management of the medical facilities for the

implementation of the sanatorium-resort policies in the country.

Sanatorium treatment in the MI-MI is also used as a means of recovery for employees working under high nervously-psychological stress and is carried out by HLTR in the branches: Hisarya, Varna and Bankya:

- HLTR – Bankya Branch – a total of 100 hospital beds;
- HLTR – Branch Varna – a total of 150 hospital beds;
- HLTR – Hisarya Branch – a total of 260 hospital beds.

Comparative analysis during 2017-2018-2019-2020 years of the activities of hltr – branches of MI-MIA-Hisarya, Varna and Bankya the main activities of hltr are:

✓ Conducting remedial recreation for employees, retirees from the Ministry of the Interior, family members and civilians with the possibility of conducting strengthening and restorative procedures.

✓ Conducting remedial rest for employees working under increased nervous and mental tension – in the city of Hisarya.

✓ Carrying out diagnostic and therapeutic activity and monitoring of those admitted for treatment in the hospital.

✓ Rehabilitation of patients, including physical therapy, motor and mental rehabilitation, balneotherapy.

✓ Carrying out rehabilitation in the early recovery period.

✓ Organization and implementation, if necessary, of advisory assistance and interaction with other structures of the Medical Institute a of the Ministry of Interior to coordinate medical care for patients, including accommodation of patients in other medical departments.

✓ Providing of emergency medical assistance if necessary.

✓ Implementation of expert activity.

✓ Promotion and prevention of patient health.

✓ Performance of other health services, strengthening and restorative procedures depending on the profile and capabilities of the hospital for rehabilitation in outpatient settings according to a previously established order and price list.

✓ Conducting organized events, providing hotel services and halls in accordance with the normative documents regulating the activities of hospitals under the Ministry of the Interior.

✓ Introduction of modern diagnostic and treatment methods, incl. expanding the therapeutic volume of reshaped physical factors.

✓ The clearest picture of the trends in the development of the activity is provided by the annual comparative analysis – for 2017 compared to 2018, for 2018 compared to 2019 and for 2019 compared to 2020 (see Tables 1 and 2).

Table 1 – Comparative analysis during 2017-2020 years of the activities of hltr – branches of MI-MIA-Hisarya, Varna and Bankya the main activities of hltr

№	Indicators	Measure	Report 2017	Report 2018	Report 2019	Report 2020
1	Average annual number of beds	n	510	510	510	510
			0	0	0	0
2	Staff list	n	158	156	154	148
			0	0	0	0
	Doctors	n	19	19	18	17
	Doctors with a specialty	n	19	19	18	17
	Medical specialists (nurses, rehabilitators, massage therapists, midwives)	n	47	47	48	47
	Medical orderly	n	30	29	29	29
	Senior non-medical staff	n	9	9	9	9
	Other staff	n	53	52	50	46
			0	0	0	0

№	Indicators	Measure	Report 2017	Report 2018	Report 2019	Report 2020
3	Treated patients – total	n	9737	10970	10772	4773
	Against payment – price list	n	854	782	864	233
	On clinical pathways	n	4189	5668	5838	3251
	Regulations of the Ministry of the Interior	n	4694	4520	4070	1249
4	Spent bed days – total	n	85106	92203	88423	36514
	Against payment – price list	n	5228	6466	5976	1430
	On clinical pathways	n	29327	39688	40905	22770
	Regulations of the Ministry of the Interior	n	50551	46049	41542	12314
5	Usability of hospital beds – days	d	166.87	180.79	173.38	71.60
6	Usability of hospital beds – % (for 365 days)	%	45.72	49.53	47.50	19.62
7	Turnover of one hospital bed	n	32.15	33.21	21.12	9.28
8	Average length of stay per patient	d	7.57	7.54	8.21	7.71

Branches with an unchanged average annual number of beds, maintained average roster composition in 2017-2019, and a minimal decrease in 2020, report a smooth increase in the number of patients who passed in 2017-2019, and a half decrease in 2020.

Hospital bed utilization approaches 50% in 2017-2019 and sharply decreases to 19.62% in 2020 and an identical change marks the turnover of one bed which sharply decreases in 2020 to 9 days while for the average stay of one patient, the values are about 8 days for all years.

These results are the result of a management decision for the affiliates to cease operations during certain periods during the pandemic announced by the World Health Organization – COVID-19.

Table 2 – Activity development trends - for 2017 compared to 2018, for 2018 compared to 2019 and for 2019 compared to 2020

№	Indicators	Measure	2017/ 2018 (%)	Growth +/-	2018/ 2019 (%)	Growth +/-	2019/ 2020 (%)	Growth +/-
1	Average annual number of beds	n	100	–	100	–	100	–
2	Staff list	n	98.73	1.27	98.72	1.28	96.10	3.90
	Doctors	n	100	–	94.74	5.26	94.44	5.56
	Doctors with a specialty	n	100	–	94.74	5.26	94.44	5.56
	Medical specialists (nurses, rehabilitators, massage therapists, midwives)	n	100	–	102.13	2.13	97.92	2.08
	Medical orderly	n	96.67	3.33	100	–	100	–
	Senior non-medical staff	n	100	–	100	–	100	–
	Other staff	n	98.11	1.89	96.15	3.85	92.00	8.00
3	Treated patients – total	n	112.66	12.66	98.20	1.80	43.94	56.06
	Against payment – price list	n	91.57	8.43	110.49	10.49	26.97	73.03
	On clinical pathways	n	135.31	35.31	103.00	3.00	55.69	44.31
	Regulations of the Ministry of the Interior	n	96.29	3.71	90.04	9.96	30.69	69.31
4	Spent bed days – total	n	108.34	8.34	95.90	4.10	41.29	58.71
	Against payment – price list	n	123.68	23.68	92.42	7.58	23.93	76.07
	On clinical pathways	n	135.33	35.33	103.07	3.07	55.67	44.33
	Regulations of the Ministry of the Interior	n	91.09	8.91	90.21	9.79	29.64	70.36
5	Usability of hospital beds – days	d	108.34	8.34	95.90	4.10	41.29	58.71

№	Indicators	Measure	2017/ 2018 (%)	Growth +/-	2018/ 2019 (%)	Growth +/-	2019/ 2020 (%)	Growth +/-
6	Usability of hospital beds – % (for 365 days)	%	108.34	8.34	95.90	4.10	41.29	58.71
7	Turnover of one hospital bed	n	103.30	3.30	63.60	36.40	43.94	56.06
8	Average length of stay per patient	d	99.60	0.40	108.87	8.87	93.98	6.02

The change in indicators of spent bed days and treated patients in all years shows the same trend of a slight increase in 2018, then a decrease in 2019 and a drastic decrease in 2020 and ranks the affiliates as follows:

- 1st place – Hisarya branch;
- 2nd place – Varna branch;
- 3rd place – Bankya branch.

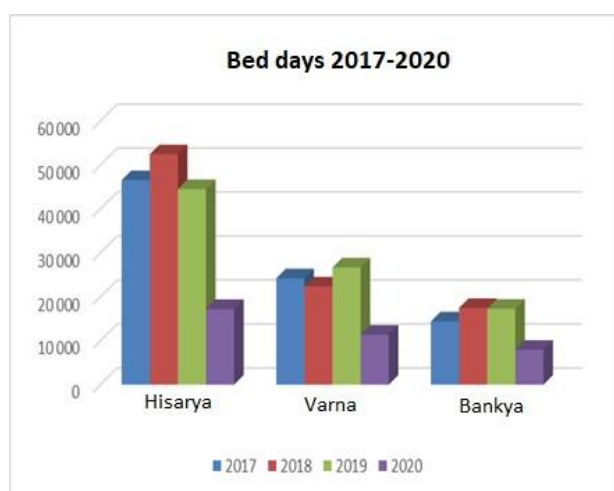


Figure 1 – Bed days 2017–2020

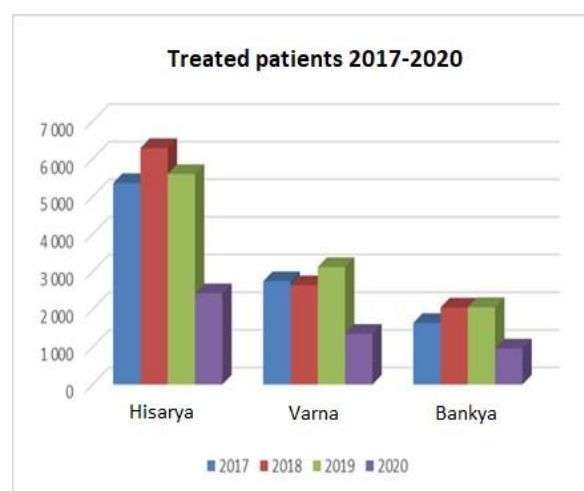


Figure 2 – Treated patients 2017–2020

The ratio of patients who passed (on clinical pathways to Regulations of the Ministry of the Interior) is about 1000 patients in favor of those who passed according to “on clinical pathways“, while in 2020 the difference becomes 2000 patients who passed (see Figures 3 and 4).

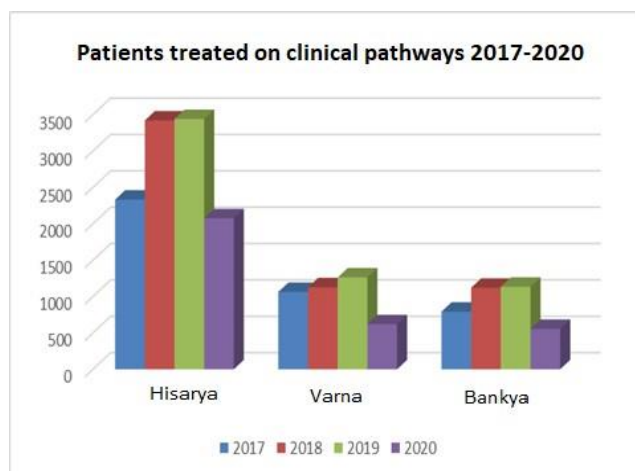


Figure 3 – Patients treated on clinical pathways
2017–2020

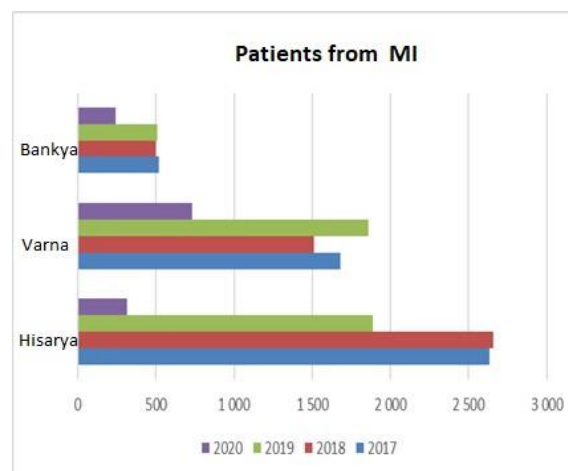


Figure 4 – Patients from MI

The revenue structure is dominated by those from sanatorium treatment and rehabilitation of employees, pensioners, and their family members in HLTR – the cities of Hisarya, Varna and Bankya and the issuance of a medical certificate for work, as well as the treatment provided.

Assessment

Tendency to improve the financial and economic indicators as a result of a drastically reduced volume of activity in 2020 – reduced number of treated patients and spent bed days, as well as the anticipatory increase in the volume of income from activity compared to the increased amount of the expenditure part in the drastic and uncontrollable change in 2020.

The need for constant and immediate “risk management” by the management team outlines the financial picture, with the leading element being regulation and not forgetting that the damage caused and the protection of financial interests are the monetary expression of each dimension, both nationally and in international and global terms of financial security.

From the mentioned results and analyses, it is clear that the stronger Central Clinical Base and affiliates cover the financial deficit of the weaker affiliates. Through the prism of economic and medical efficiency, we emphasize that the affiliates have achieved effective and, accordingly, ineffective use of financial resources.

Public life in the field of health care requires an analysis of the complex of factors that enable a more complete assessment of the emphasis of the rehabilitation activity and the impact of the environment on the development and activity of the affiliates of the MI-MI.

Socio-economic and political factors have a significant influence on the quantitative and qualitative parameters of the rehabilitation activities of the HLTR. But with the toolkit of health-policy analyzes of the external factors, the existing risks of the managed system (HLTR) can be identified, as well as effective approaches to overcome the existing risks can be identified. Risks arise from two groups of factors related to existing realities and impacts:

➤ **Impacts outside the health system (macroeconomic factors):**

Reforms in the social and health sector in a period of economic and financial crisis carry a high degree of political and social risk.

All this exerts considerable pressure on the amount of public expenditure, seeking to increase their efficiency or limit them with regulations.

The state of the national economy determines both the stability and the speed of implementation of health care reforms.

The impact of political factors is reflected by the degree of political stability, the presence of political will, the development of centralization/decentralization processes, as well as the competence and experience of the state administration in the field of health care. In this group of impacts, the adopted model of the social value system and the foreign policy impacts should be taken into account.

➤ **Health System Impacts:**

The absence of competent and active information of the medical professionals and the population stimulates the processes of opposition against the new rules and the communication and management systems. In addition, the absence of credible systems for monitoring and controlling the results achieved, for the satisfaction of patients and medical professionals, lowers the degree of public and personal empathy for the success of the reform.

The current study and the identified highlights for the rehabilitation activity in the city of Hisarya, the city of Varna and the city of Bankya – affiliates of the Medical Institute of the Ministry of the Interior shows that:

✓ depending on the economic nature, the different types of rehabilitation services, the paid/unpaid ratio are the starting points for different segments of the rehabilitation sphere;

✓ benefits and issues such as threats to the financial system and financial security should not be underestimated. And as Assoc. Prof. Boyko Petev notes, about the most important trick: have you ever thought that your money, kept in any bank account, is not actually yours? They are the property of the bank that has signed a contract with you to give you access to them in strictly defined

ways (credit cards, online banking, visiting branches), only at certain times and only up to certain limits. And all this for a fee – for that, you keep your money in the bank; for spending them;

✓ where business spheres can operate – free competition, there are also rehabilitation services that must be subject to strict state regulation;

✓ overcoming the tendency of a commercial variant of development of long-term treatment and rehabilitation activity to the detriment of solving social tasks;

✓ the monitored region has a serious resource potential that overcomes the potential opportunities and further development of the sanatorium treatment system in the region;

✓ the observation and analysis of the activity in the Medical Institute of the Ministry of the Interior show the highlights in the work of the management team and, accordingly, the subsequent economic consequences;

overcoming the economic consequences of the COVID pandemic, will be among the highlights of the work of the leadership of the MI-MI in the coming years.

Conclusions

Presenting to you my analysis of the operational activity in HLTR – the city of Hisar, the city of Varna and the city of Bankya, I prove the need for a mechanism to compensate for the defects of information asymmetry, the inelasticity of demand and the high financial risk for the individual user, which necessitates the need for the certain accents in the work and management of the MI-MI, which lead to the making of correct management decisions, to prevent or minimize risks.

And last but not least, we would ask: Has the purpose of the policies been achieved: to guarantee the powers of citizens to make decisions about their health, to protect their human rights and to prevent discrimination, including based on illness or disability?

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