

Gulbanu Dosberdiyeva*Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan (corresponding author)**E-mail: dosberdieva.g@kaznmu.kz**ORCID: <https://orcid.org/0000-0002-2560-6370>***Gulzhakhan Kashafutdinova***Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan**E-mail: kashafutdinova.g@kaznmu**ORCID: <https://orcid.org/0000-0003-4088-2899>***Ruslan Kulmanbetov***Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan**E-mail: kulmanbetov.r@kaznmu.kz**ORCID: <https://orcid.org/0000-0002-9631-0112>*

Assessment of Management Competencies of Public Dental Institutions

Abstract

The article presents the results of an assessment of the functional management model common in public dental organisations. The subject of the study is the model of management of dental organisations. The method of self-assessment of the main managerial functions by D.V. Maslov is used as a research tool. *Research methodology.* To evaluate the functional model of management, the article applies the methodology of express assessment by D. V. Maslov, who proposed to use a questionnaire containing questions to assess the main management functions: planning/forecasting, organisation, motivation, control, coordination and communication. The first five criteria combine 25 assessment categories. The questions in the rapid assessment questionnaire are divided into five groups according to the criteria. Thus, 25 questions correspond to 25 assessment categories. Each question has five possible answers, of which only one could be selected. In order to obtain objective information, it is necessary that not only managers but also employees take part in the survey. The advantage of a two-way assessment is the ability to determine the consistency of managers' and employees' perceptions of the state of affairs in the organisation. At least 50% of managers and at least 80% of employees of the organisation took part in this survey. The questionnaire by the above-mentioned author, adapted to the specifics of dental organisations, was used as a basis. Answer options characterised the current situation in the field of governance: 0 – no activities; 1 – activities are carried out from time to time; 2 – activities are carried out partially, depending on the situation; 3 – activities are carried out continuously and systematically; 4 – activities are carried out as efficiently as possible (benchmark level). The score for each of the five criteria can reach 20 points, and the maximum score for the management system is 100 points. The *results* of the rapid assessment of managers showed that such management functions as "control" and "motivation" need to be improved the most. And the assessment of the HR management system showed that there are significant discrepancies with the opinion of managers in almost all management functions. Significant discrepancies were found in the assessments of management processes between managers and employees (from 0.1 to 1). *Conclusion.* The results of the study led to the conclusion that the management model does not meet modern requirements.

Keywords

state dental organisations,
self-assessment,
functional management
model

JEL: M14

This is an Open Access article, distributed under the terms of the Creative Commons Attribution CC BY 4.0

DOI: <https://doi.org/10.30525/2500-946X/2024-2-5>**1 Introduction**

In today's environment, the healthcare sector is becoming increasingly dependent on the professionalism of its staff, whose work directly affects the performance of healthcare organisations.

Available sources present many approaches to assessing the performance of healthcare

organisations. According to some researchers, management effectiveness is determined by the achievement of planned strategic goals and the implementation of plans. Other authors put the emphasis on achieving economic impact (Maslov, Watson, Chilishi, 2005, 2009).

For example, A.V. Zherebtsov et al. (Zherebtsov, Luzhenkov, Nedelin, Kharitonov, 2011) developed

a method of assessing the potential capabilities of a medical institution based on a universal set of indicators containing information about the types of medical services, resource provision, methods of treatment, personnel, structure, working conditions, etc. According to the authors, the set of such indicators determines the "potential" of a medical organisation.

In the world practice (especially in European countries), self-assessment of an organisation's performance against the criteria of the EFQM Excellence Model is widely used. The model is based on 8 key principles: improving efficiency and effectiveness (result orientation), management leadership and goal consistency, continuous development and staff engagement, customer satisfaction, improvement and innovation, phenomena and process management, development of partnerships with other organisations, and corporate social responsibility.

All medical organisations in the republic, regardless of their form of ownership, are subject to mandatory accreditation to ensure that the types of medical care they provide meet quality and safety standards.

Regulatory documents that establish requirements for management systems are as follows: ST RK ISO 9001-2016 "Quality management systems. Requirements", ST RK ISO 14001-2016 "Environmental management systems. Requirements and guidelines for use", etc. It should be noted that often the criteria proposed for self-assessment of the governance model may not be entirely clear and difficult for managers of healthcare organisations to interpret. For instance, such as "social responsibility", "information security", "process approach", etc.

According to accreditation standards, the management of a healthcare organisation covers all areas of its activities. However, many chief medical officers still focus primarily on the organisation of control procedures. This attitude is completely contrary to modern ideas about quality activities and has proven to be ineffective in practice, since, according to the Deming principle, 95% of quality problems are caused by ineffective organisational management.

In recent years, lean manufacturing technology (LEAN), a methodology first developed for Toyota, has become increasingly popular in health care. Lean manufacturing is a methodology aimed at efficient use of internal reserves, as well as continuous improvement of business processes and improvement of organisation and working conditions. A lean enterprise is an enterprise that produces products or provides services that fully meet the needs and expectations of consumers. The main components of lean manufacturing are the development of a corporate culture aimed at continuous improvement and certain management technologies to increase the efficiency of healthcare

organisations and encourage staff initiatives for improvement.

Lean medicine is based on the following principles:

1. Creation of more defect-free products or services.
2. Reduction or elimination of losses and increased efficiency.
3. Increased satisfaction with services among patients and employees.
4. Cost reduction.
5. Improving patient safety (The Five Principles of Lean Thinking).

Improving the performance of a healthcare organisation is only possible by monitoring the implementation of the planned quality work and setting new goals that allow for a cycle of continuous improvement. This scheme is called self-assessment in global practice. In healthcare, such categories as customer relationship management, process approach, stakeholders, social responsibility, information security, etc. are not always perceived and adequately used. In order to promote new management technologies, it is necessary for the manager and staff to adopt a quality philosophy.

To assess the quality of management in a healthcare organisation, a diagnostic self-assessment model of the organisation's management system can be used – the Management Functional Assessment (MFA) model developed by Dmitry Maslov together with Professor Paul Watson (Sheffield Hallam University, UK) and Dr Nicholas Chilishi (University of South Australia). This methodology is based on a survey and recommends the participation of at least 80% of managers and at least 50% of employees. The structure of the functional model is represented by the main criteria that reflect the management functions: forecasting/planning, organising, motivating, controlling, coordinating and communicating. The first five criteria combine 25 assessment categories. The questions of the rapid assessment questionnaire are divided into five groups according to the model criteria. Twenty-five questions correspond to twenty-five assessment categories. Each question has five possible answers. One option is allowed to be selected that most accurately describes the current state of this direction:

- 0 – no activities;
- 1 – activities are carried out from time to time;
- 2 – activities are carried out partially, depending on the situation;
- 3 – activities are carried out continuously and systematically;
- 4 – activities are carried out as efficiently as possible (benchmark level).

Thus, the score for each of the five criteria can reach 20 points, and the overall score for the management system can reach 100 points.

Apart from providing an overview of the organisation's management system, the self-

assessment also helps to identify areas for improvement. The purpose of the self-assessment is to develop recommendations for improving the organisation's performance based on reliable evidence.

The result of the self-assessment is the planning of measures that can lead to real progress in management.

The purpose of the study is to develop practical recommendations for improving management in public sector dental organisations based on the analysis of the results of self-assessment of the functional management system.

The relevance of the study is due to the need to improve management in public dental organisations in the context of limited access to dental services, especially for socially disadvantaged groups of the population, as well as high competition with private dental organisations.

The novelty of the study lies in the fact that for the first time in the last decade, a study of the management model in state dental organisations in Kazakhstan was conducted.

2 Research Methods and Results

At the first stage of the study, the authors assessed the staffing of dental organisations by such indicators as personnel, professional training, and the dynamics of the average annual number of doctors, nursing staff and other specialists over the past three years. The results are presented in Table 1.

As can be seen from Table 1, overall staffing levels in dental organisations remain stable. In 2018, there was a slight shortage of specialists with secondary medical education (-0.4%).

The professional qualification of doctors and medical assistants was assessed by the availability of qualification categories. It turned out that 22.6% had the highest qualification category in 2018, and 24.5% had the first.

The proportion of medical staff with the highest qualification category was 20.8%, and the first category was 7.8%. This indicator is important for planning the professional development of staff in the future.

One of the indicators of dysfunction in an organisation is a high level of staff turnover.

In practice, it has been established that staff turnover within 5% is normal. This indicates the renewal of human resources, which has a beneficial effect on the organisation's activities: employees retire, move to a new place of residence, and those who are not working effectively are dismissed.

The normal rate of employee turnover for an individual company may vary significantly depending on the type of business and location of the organisation, working conditions and other factors.

At the time of the survey, staff turnover in dental organisations did not exceed 5%, which can be considered a factor of staff stability.

The share of doctors with less than 5 years of experience was 9.4%. The vast majority were doctors with more than 10 years of experience – 70%. The share of healthcare professionals with less than 5 years of work experience was 5.2%. This professional group was also dominated by specialists with 10-15 years of practical experience – 68%.

At the second stage of the study, a self-assessment of the management model of managers and employees was conducted. The survey involved 36 heads of dental organisations (100%). The share of chief doctors and deputy chief doctors was 22%, heads of departments – 35%, chief and senior nursing staff – 10%, chief accountants and economists – 33%. The share of medical staff who took part in the survey was 56%.

The functional management model was evaluated according to the methodology proposed by P. Watson, N. Chilishi and D. Maslov (2005, 2009). The results are presented in Table 2.

As can be seen from Table 2, the lowest scores were given to the functions of motivation (14 points), control (14.5 points) and organisation (14 points).

Thus, the total actual score of the functional management assessment from the perspective of managers was 72.5 points (out of a maximum of 100 points).

D. V. Maslov proposed to use a questionnaire to assess the management system, which contains the main management criteria: planning/forecasting, organisation, motivation, control, coordination and communication.

To implement the research tasks, the questionnaire of the above-mentioned author, adapted to the specifics of dental organisations, was used as a basis.

TABLE 1 Staffing level in 2016-2018

Name of groups by position	Staffing percentage, %			
	2016	2017	2018	Increase/decrease in 2018 compared to 2016, %
Dentists	95.4	95.2	96.3	+0.9
Medical staff	92	90.2	91.7	-0.4
Other specialists with higher professional education	100	100	100	1

Source: compiled by the authors

TABLE 2 Functional management model assessment map

	Actual	Maximum	Weight coefficient
1	2	3	4
1. Planning			
1.1 The organisation's strategic plan defines its mission, vision, strategic goals, objectives, and performance indicators	4	4	0.5
1.2 The strategic plan is developed with the participation of representatives of structural units and takes into account the interests of owners, employees, customers and society	4	4	
1.3 Based on the strategic plan, the annual development plan of the organisation is developed and approved	4	4	
1.4 The strategic plan for risk management and continuous quality improvement is developed	2	4	
1.5 Management plans human and capital resources to achieve strategic objectives	3	4	
1.6 The organisation's mission and vision are accessible to employees and customers	2	4	
1.7 The opinion of stakeholders (owners, consumers, employees, society) is taken into account when setting operational goals	3	4	
1.8 The organisation's management monitors the implementation of the annual plan and task indicators on a quarterly basis	2	4	
1.9 The organisation has a system of continuous quality improvement (internal audit)	4	4	
1.10 Organisational resources are planned to achieve short- and medium-term goals	2	4	
Total for the section	thirty	40	15
2. Organisation			
2.1 The organisational structure is documented and presented in a diagram	4		
2.2 Management is carried out by qualified managers	3	4	
2.3 The job description of the chief executive officer defines his or her role, responsibilities and rights	4	4	
2.4 The head of the organisation is responsible for operational issues and risk management	4	4	
2.5 The roles and responsibilities of each business unit are clearly defined with the participation of each employee	3	4	
2.6 The functions and responsibilities of each business unit are clearly defined with employee input and communicated to employees	3	4	
2.7 The organisational structure is regularly reviewed and communicated to all staff	3	4	
2.8 Patients are provided with information about their illness and care through conversations, brochures and videos	1	4	
2.9 The organisation has a system of continuous quality improvement, an annual quality improvement plan with evaluation indicators	3	4	
Total for the section	28	40	14
3. Motivation			
3.1 The organisation has developed a policy of monetary and non-monetary incentives for employees	0	4	0.5
3.2 Job descriptions are developed for all staff positions, including qualifications, responsibilities, accountabilities and review periods	3	4	
3.3 Before appointing a specialist authorised to practice, the organisation checks educational credentials and assesses clinical skills	3	4	
3.4 Each staff member completes an internship to learn about the organisation, its goals and job responsibilities	3	4	
3.5 The organisation has a staff development plan based on the needs of staff to improve their professional level	3	4	
3.6 The organisation has a policy of continuous professional development of staff with a planned budget for this purpose (at least once every 5 years)	3	4	
3.7 There is complete documented information about each employee that is confidential	4	4	
3.8 The organisation has a procedure for evaluating the work of staff in each unit for compliance with the goals and objectives of the organisation, and for determining the achievements of each employee	3	4	

(End of Table 2)

1	2	3	4
3.9 Measures are taken to maintain occupational health and safety of staff with appropriate documentation	3	4	
3.10 The organisation has developed a mechanism for material incentives for employees based on clear evaluation indicators	3	4	
Total for the section	28	40	14
4. Communications		4	0.5
4.1 The organisation has a system for patient feedback (questionnaires, written requests)	3	4	
4.2 The organisation has a documented process for collecting, recording, investigating and fairly addressing patient complaints	4	4	
4.3 Patient calls are recorded, tracked and results used for quality improvement.	3	4	
4.4 The organisation regularly measures patient satisfaction with the quality of services provided by providing contact information for feedback, surveys, etc.	3	4	
4.5 Patients (and their families) are provided with full information about the planned treatment, its cost, possible risks and benefits, and alternative methods of treatment in an accessible form	3	4	
4.6 After being informed, the patient signs a consent for invasive interventions	3	4	
4.7 The organisation has a unified information system for managing its activities	2	4	
4.8 The organisation's staff has access to reliable internet resources and telecommunication technologies to carry out their activities	3	4	
4.9 The organisation uses a standardised document management process adopted in the Republic of Kazakhstan	4	4	
4.10 The organisation adheres to the standards for maintaining and storing medical records	2	4	
Total for the section	thirty	40	15
5. Control		4	0.5
5.1 The organisation controls and prevents infectious diseases	4	4	
5.2 The organisation monitors clinical quality and safety through medical record review and case analysis.	1	4	
5.3 The organisation has an internal audit system in place	4	4	
5.4 The organisation collects and systemises information about the actual state of activity and its results	3	4	
5.5 Deviations and irregularities in performance are analysed on an ongoing basis	1	4	
5.6 The organisation has developed corrective measures to eliminate deviations and irregularities	2	4	
5.7 Operational control in the organisation is aimed at implementing plans	3	4	
5.8 Strategic control is aligned with the organisation's goals and objectives	3	4	
5.9 Financial performance is monitored in the organisation	4	4	
5.10 The organisation is currently accredited	4	4	
Total for the section	29		14.5
TOTAL		72	

Source: compiled by the authors of the article based on (Maslov, Watson, Chilishi, 2005, 2009); (based on manager assessment results) <http://opac.ntbminprom.ru:8080/opac/index.php?url=/notices/index/IdNotice:438829/Source:default>

As a result of the survey, the following data were obtained – Table 3.

As can be seen from Table 3, the lowest self-assessment scores by managers of the management functions "control" and "motivation". Employees rated the functions of "control", "planning" and "motivation" the lowest. The significant difference in the assessments of managers and employees may indicate insufficient management coordination.

Hence, the results of the assessment of the functional management model obtained using the methods described above are quite comparable and

allowed to conclude that it is necessary to improve the work in these areas.

A two-way assessment of the management system allowed to determine whether the perception of managers and employees of the current situation corresponds to reality and to calculate the management adequacy ratio using the formula:

$$K(AM) = I_{\text{hands}} - I_{\text{worker}} / 4,$$

where K (AM) – management adequacy coefficient;
I hands – average rating of managers;
I worker – average employee rating;
4 – maximum possible score.

TABLE 3 Comparative assessment of the functional management system of managers and employees of dental organisations

Question	Average rating of managers	Average rating of ordinary employees
Planning/Forecasting		
1. Has the purpose of the organisation been defined and are its strategic and current objectives clearly defined?	3.2	2.9
2. Is customer data collected and analysed?	2.0	1.6
3. Are the areas of activity clearly delineated in the enterprise?	3.9	3.9
4. Is information about competitors and the experience of other organisations analysed?	1.9	1.2
5. How rationally are resources allocated: material, human, financial, and information?	3.2	2.1
Total for the block	14.2	11.7
Organisation		
6. Is the organisational structure of the clinic clear?	3.6	2.8
7. Are there documents and standards of the organisation that regulate the duties and responsibilities of individual departments and each employee?	3.6	2.9
8. Are there conditions for improvement and development of the organisation?	3.0	2.5
9. Is the process of providing healthcare services effectively organised?	3.1	2.9
10. Are the healthcare services provided attractive to the consumer?	3.8	3.5
Total for the block	17.1	14.6
Motivation		
11. Are the manager's leadership skills high?	3.4	2.5
12. Does the organisation create conditions for employee training and development?	3.0	2.0
13. Are the personal needs of employees met?	2.5	1.9
14. Are employees involved in the development of the enterprise?	2.6	2.9
15. Are employees satisfied with the results of their work?	2.3	2.5
Total for the block	13.8	11.8
Control		
16. Does the organisation have a system for assessing the quality of the service delivery process?	1.5	1.3
17. Does the organisation have a system for evaluating the results obtained?	2.2	2.0
18. Are the opinions and wishes of patients taken into account in the work?	2.0	2.5
19. Does the organisation evaluate the efficiency of resource use?	3.1	2.7
20. Are the results obtained in line with the organisation's stated goals?	3.2	3.0
Total for the block	12	11.5
Coordination		
21. Does the organisation have an effective management system?	3.2	2.0
22. Are there good internal communications between the organisation's departments?	3.9	2.8
23. Is work being done to resolve and prevent conflict situations in the organisation?	2.0	1.2
24. Are the plans and objectives of the organisation adjusted and clarified?	2.9	2.8
25. Are new information and telecommunication technologies used in the work of the organisation?	3.9	3.1
Total for the block	15.9	11.9

Source: compiled by the authors of the article based on (Maslov, Watson, Chilishi, 2005, 2009) <http://opac.ntbminprom.ru:8080/opac/index.php?url=/notices/index/IdNotice:438829/Source:default>

An analysis of the adequacy of governance was carried out for each assessed governance function and is presented in Figure 1.

As can be seen from Figure 1, there are significant discrepancies in the ratings of managers and employees for almost all management categories (from 0.1 to 1). This means that the management of dental organisations has to face significant resistance when implementing management decisions, and most of the changes initiated by the management may be ineffective.

The differences are minimal only in the assessment of the control function, which suggests that management decisions are perceived adequately and that managers and the team follow the same principles in their work.

3 Conclusions

A rapid assessment of the functional management model has revealed that the primary tasks of the management of dental organisations are to

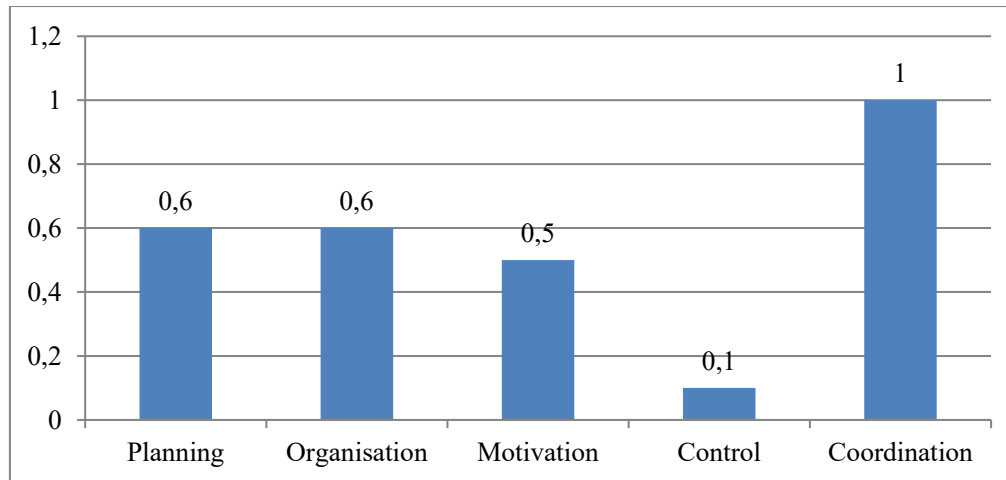


FIGURE 1 Differences in assessments of the adequacy of management of managers and staff of dental organisations

Source: compiled by the authors

identify and analyse the causes of discrepancies, establish closer interaction with the team, and strengthen the corporate culture. The results of the self-assessment can become the basis for planning the development of a medical organisation. A comparative analysis of the results of using modern innovative quality management technologies shows that the use of self-assessment provides a healthcare organisation with prospects for sustainable development on the way to achieving its goals. Low turnover and stability of the core staff of dental organisations is the most important resource for effective management.

The following recommendations are offered as recommendations for improving management in dental organisations:

- To develop strategies aimed at continuous improvement of the quality and competitiveness of services, adaptation to changes in external conditions, modernisation of the internal environment;
- to develop measures to increase corporate responsibility;
- to monitor the implementation of the organisation's mission, performance, technological discipline and quality of work.

Given the fact that the heads of medical (dental) organisations are often doctors who do not have appropriate additional training in management, their training is essential for the introduction of modern management technologies (Olovyanishnikova, 2011; Oparina, 2011; Sviridova, 2009).

References:

- [1] Maslov, D. V., Watson, P., & Chilishi, N. (2005) Functional model for assessing quality management. *Methods of Quality Management*, 3(4).
- [2] Maslov, D. V., Watson, P., & Chilishi, N. (2009) Functional model of management assessment to ensure sustainable competitive advantages. *Economics and Entrepreneurship*, 5(10), 25–39.
- [3] Zherebtsov, A. V., Luzhenkov, A. Yu., Nedelin, D. N., & Kharitonov, Yu. S. (2011) On assessing the consumer properties of medical organizations. *Healthcare Manager*, 3, 54–58.
- [4] The Five Principles of Lean Thinking / LeanUniversity. E-source: <http://www.cardiff.ac.uk/lean/principles>.
- [5] Olovyanishnikova, I. V. (2011) Features of ensuring the competitiveness of enterprises providing paid medical services. *Vector of Science TSU*, 3(17), 211.
- [6] Oparina, N. N. (2011) Assessing the effectiveness of training and development of top managers // *Handbook of Personnel Management*, 12, 22–28.
- [7] Sviridova, L. V. (2009) Problems of forming professional management teams in the conditions of innovative development of the organization. Nizhny Novgorod, 195–199.

Received on: 12th of April, 2024
 Accepted on: 25th of May, 2024
 Published on: 21th of June, 2024