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Management Knowledge and Skills Required in the Health Care System of the Federation Bosnia and Herzegovina

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PROFESSIONAL PAPER

SUMMARY

Extremely complex health care organizations, by their structure and organization, operate in a constantly changing business environment, and such situation implies and requires complex and demanding health management. Therefore, in order to manage health organizations in a competent manner, health managers must possess various managerial skills and be familiar with problems in health care. Research, identification, analysis, and assessment of health management education and training needs are basic preconditions for the development and implementation of adequate programs to meet those needs. Along with other specific activities, this research helped to determine the nature, profile, and level of top-priority needs for education. The need for knowledge of certain areas in health management, as well as the need for mastering concrete managerial competencies has been recognized as top-priorities requiring additional improvement and upgrading.

Key words: health management, managerial knowledge and skills, training and education, change management, research tool.

1. INTRODUCTION

Health managers are required to perform complex managerial responsibilities, both in the new models of health care delivery and in traditional hospital institutions, having in mind that old boundaries between administrative and medical management are slowly fading away. In majority of institutions, a low number of health managers consider that they are adequately prepared through their formal education for the career of a competent health manager (1). Although there is a low consensus on the set of basic competences and skills required of health managers, nobody questions the necessity of additional academic improvement and professional development for a competent performance of managerial functions in an extremely complex and dynamic environment such as health care (2, 3). This research aims to provide ground for a further discussion on numerous factors related to continuous education and professional development of health managers, primarily based on their personal attitudes and perceptions.

2. METHODOLOGY

As a basic research tool, author used a questionnaire designed especially for this purpose and in cooperation with international experts. The questionnaire, accompanied by detailed methodological instructions, was e-mailed, faxed or posted to the managers.

This questionnaire consists of several modules and it significantly facilitates collection, entry, processing and analysis of the data.

Focus of the research aims to identify current profile of a health manager in the B&H system of health care through the research of basic competences and skills required of health managers and through the assessment of current level of knowledge and skills possessed by those health managers (4).

As a basic tool for defining the profile of health managers, Kolb's universal model was used. This model represents a comprehensive, holistic model of all the managerial skills and competences which can be used in the existing managerial position, as follows:

Four main types of health care management skills

1. Interpersonal skills—The first most important type

of skills that job may require is called “interpersonal”, affective, emotional skill that allow working with other people. This type of skill is composed of three categories of skills, including:

Leadership skills: The ability to inspire and motivate others, to “sell” them ideas, to negotiate and promote joint projects.

Relationship skills: Ability to be self-conscious, to accurately assess themselves, have an understanding for others, facilitate communication, collaboration and working with teams.

Helping and delegating: Ability to establish and promote relations, helping others to get the opportunity to grow, ability to lead groups and teach others.

2. Information management: The other main type of skills that job may require is information management and these perceptual skills enables us to collect, organize and interpret information. And this type of skill is composed of three categories of skills, including:

Creativity change/management: Ability to adapt to change, “dealing” with the new situation, to define strategies and solutions.

Information gathering: The ability of understanding and awareness of organizational events, listening with an open mind, and understanding the sources of obtaining and information exchange.

Information analysis: Ability to assimilate information from various sources, discovering their meaning and interpretation of specialized (technical) information for the purpose of communication and general use.

3. Analytical skills: The third main type of skills are analytical skills—the skills of knowledge / thinking that enable the use and assimilation of new informations and use for planning purposes or for creating a system of planning. Also the group of analytical skill is composed of three categories of skills, including:

Planning: The ability of seeing things from a broader perspective, conceptualizing, set theory, predicting the future and developing long-term plans.

Quantitative data analysis: Ability to use analytical tools/techniques from functional disciplines (finance, marketing, operations management), statistics and computers to analyze informations.

Technology management: Ability to use, maintain or create new technology, equipment or processes, whether on computers, information/control systems, or sophisticated machinery, knowledge and understanding of current technological trends.

4. Action skills: The fourth and last type of skills that job may require is called “action skills” – skills oriented on behavior that enables the planning, directing and implementing actions. And this type of skills is composed of three categories of skills:

Goal setting: Ability to identify goals and standards, the distribution of personnel and resources, and to evaluate performance.

Action taking skills: The ability to dedicate the achievement of the objectives, work in conditions of limited resources, respect of deadlines, routing the others and efficiency.

Entrepreneurial skills: Ability to take initiative, seek and use opportunities, risks, decision making in uncertain conditions, and allow things to “happen”.

These four types of skills with subgroups contained in it, creating the universe of skills that may be required for the managerial job.

The differences found between the level of importance and priority of skills offered or activities that require a certain capacity, and level of skills that currently have the managers are top-priority issues, which require additional health management education and training in order to enable health managers to perform their roles in a more competent and high-quality manner.

3. RESULTS

Data were collected from the sample consisting of managers in executive positions from all health institutions at all three levels of health care in the Federation B&H. The whole sample included 142 health managers, divided by the level of health care as follows:

- Primary health care – directors of health centers; 63 managers interviewed,
- Secondary health care – directors of cantonal, general and specialized hospitals ; 12 managers interviewed,
- Tertiary level – directors of clinical centers and directors of clinics (67 managers interviewed).

Basic characteristic of an average manager in the B&H system of health care should be the following: aged 50, “mostly” males with more than 20 years of service and loyalty to the organization. BH health manager is primarily a clinician with a very high degree of medical/clinical education and practice and with, on the average, 6-year managerial seniority which is subordinated to a medical practice. He/she views himself/herself primarily as a physician without an adequate managerial education.

3.1. Business priorities – level of priorities of the crucial skills for effective performance of managerial roles

Data obtained in part of the research relate to the identification of the most required skills and competences, are presented in Table 1.

To determine the level of importance and priority of skills offered or activities that require a certain capacity, have been used previously specified universal module of skills evaluation for which is used five-point scale that ranged:

- Priority activities in business.
- Important skill or activity.
- Regularly used skills.
- Occasionally required skills.
- Irrelevant skills for the job.

Results from this module were identified that from the offered major groups of skills, interpersonal skills are on the first place of required skills and using the specified scale, belonging to a group of important skills and activities (Table 1). On the second place is the group of action skills, also belong to a scale of important skills, and while at the third position is a group of skills relating to

information management and the scale is used regularly between skills and important skills. A group of analytical skills is at the fourth place in relation to the priority of the importance of managers in their daily work.

This sequence corresponds to the identified rank of skills with which managers are “pressed” in their daily work and is a consequence of learning through practice and gaining experience, and not adequate academic and professional preparation for a managerial position.

The results from this part of the research show that the health care managers primarily rely on interpersonal skills without frequent recourse to formal authority and command which is derived from positions of power. It is assumed that the practice of using personal, interpersonal skills acquired, rather than the prescribed power, just practiced by colleagues/doctors, the result of using the skills already acquired through medical education (5). This is the reason that the medical professional credibility is considered a very important prerequisite for the managerial function in the Bosnia and Herzegovina health context and that of most health managers require possession of a high level of interpersonal skills, especially relation skills.

In the main groups of skills, there are significant differences between particular scales of skills in relation to the level of their priority. Significant differences between individual skills which belong to the same scale of skills were also identified. For example, in the group of the most required skills and competences, i.e. interpersonal skills, there are differences between leadership skills and the other two groups of skills, i.e. relationship skills and helping and delegating skills. Based on the results obtained, leadership skills, i.e. ability to motivate, to inspire and to sell the idea, are less required than the other two scales of skills (Table 1).

In accordance with the results obtained from the available twelve skill scales, most demanding are the following skills:

1. Relations skills	1.90
2. Helping and delegating	1.99
3. Enterprise skills	2.17
4. The skills of taking action	2.24
5. Determination of goals	2.28

Table 1. Respective Scale of Leadership skills

In relation to the scale of values all the above skills belong to a group of important skills or activities.

The second ranked groups of necessary skills were **action skills**, skills oriented toward behavior that enable planning, directing and conducting actions (6). Within this group of skills there are no significant differences between the respective scales of skills (Table 1). In relation to group of action skills of the managers surveyed are most required **entrepreneurial skills** or the ability to take initiative, seek and use opportunities, make decisions in uncertain conditions, and to allow things to „happen“.

Information management is group of skills that was in third place in relation to rank of priorities. It is evident that the managers interviewed recognized the

importance of this group of perceptual skills that enable collecting, organizing and interpreting new information. Among respondents were identified as most demanding the **skills of creativity/ change**, or the ability to adapt to change, „to cope“ with new situations and the ability to define strategies and solutions. Following is the scale of **collecting information** relating to the ability of comprehension and understanding of events inside and around the organization, listening skills of “open mind” and understanding the sources of production and exchange of information. With slight differences, beyond the ability of gathering information was ranked the **ability to analyze information**, or the ability to assimilate information from multiple sources, revealing their meanings and the conversion of specialized (technical) information for the benefit of the general purpose of communication and use (Table 1).

Analytical skills are ranked as the minimum required skills. From this follows that managers surveyed in their professional development have not reached the stage where the necessary skills of cognition/thinking, skills in using and assimilating new information and their use for planning purposes or for creating a system of planning.

MAIN GROUPS AND SCALES OF SKILLS	Level of competences and skills required of health managers		Current level of knowledge and skills	
	Average value	Rank	Average value	Rank
INTERPERSONAL SKILLS	2.17	I	3.80	I
Leadership skills	2.61	9	3.45	6
Relationship skills	1.90	1	4.01	1
Helping and delegating	1.99	2	3.94	2
INFORMATION MANAGEMENT	2.44	III	3.15	III
Creativity change/management	2.34	6	3.37	5
Information gathering	2.42	7	3.10	8
Information analysis	2.55	8	2.97	9
ANALYTICAL SKILLS	2.80	IIII	2.58	IIII
Planning	2.67	10	2.70	11
Quantitative data analysis	3.02	12	2.39	12
Technology management	2.72	11	2.65	10
ACTION SKILLS	2.23	II	3.53	II
Goal setting	2.28	5	3.45	6
Action taking skills	2.24	4	3.5	4
Entrepreneurial skills	2.17	3	3.64	3

Table 2. The level of Competences and the level of knowledge of main groups of skills

3.2. The level of skills—existing personal level of knowledge and skills in areas of essential managerial skills

To determine the current level of knowledge and skills, or the level of skill that a manager has for a particular skill or activity, we re-use the same universal module for skills evaluation for which is used five-point scale that ranged:

- Limited knowledge.
- Only conceptual knowledge with a limited ability to perform
- Need help to execute.

- Possible execution without the help, ability to lead and direct.
- Comprehensive knowledge – can provide expert advice and be a leader in execution.

The order of competence in relation to individual skills, with minor differences, following the ranking of job skills required by managers as a result of learning through practice and direct experience (Table 1).

In the first ranked group of **interpersonal skills** are identified differences between individual skills scales. Identified are some differences between individual skills that belong to the same scale of skills. Thus, the highest level of knowledge and skills identified in “**relationship skills**”, “**helping and delegating**”. **Leadership skills**, or the ability to inspire and motivate, and „selling the idea“, according to survey results had a significantly lower level of competence.

In second place are **action skills**. Within this group of skills there are no significant differences between the scales of individual skills in relation to the level of competence in relation to the applied scale of values belonging to the skills or activities that require some help in implementation. In this group the managers surveyed had the highest levels of **entrepreneurial skills**. Somewhat less knowledge and ability are identified among the skills for target setting (Table 1).

Information management is a group of skills that was third in this perceptual group of skills, without significant differences between the scales of individual skills that belong to this group. General assessment of these skills is that managers in their execution do not possess the appropriate level of knowledge and skills.

Analytical skills are identified as a group with the lowest skill level of knowledge and skills. Certainly, the managers interviewed in their academic and professional development have not had a chance to reach a satisfactory level of knowledge and skills in the skills of knowledge/ thinking that enable them to collect and use new information and their use for planning purposes or for creating a system of planning (Table 2).

3.3. Areas that need additional experience/skills in order that managers perform their job effectively

Areas where there is a need for training and education were identified as the difference between the level of skills that managers have and the level of work that needs to impose that same skill (Figure 1). As a general attitude can be concluded that in addition to interpersonal skills groups, most of the other scales with their level of training is behind the level required.

For **analytical skills** and **information management skills**, the differences between knowledge and application levels are higher, while the gap in **analytical skills** is somewhat less.

Bearing in mind the importance that **interpersonal skills** have, especially considering the significance which will in future have the leaders of healthcare organizations,

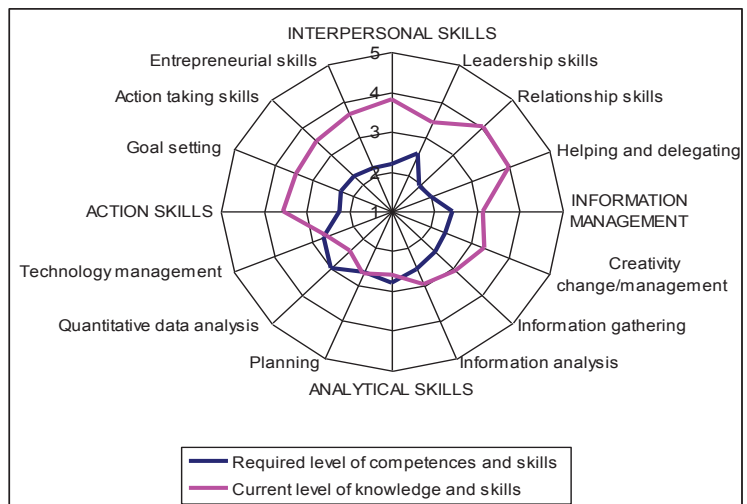


Figure 1. Ratio between levels of competences and knowledge of skills

the conclusion is unavoidable that there should be additional training in related skills. Health care managers will need to be trained to lead, direct, delegate and hold the course of the action or opinion of others. Essential to this is a skill that involves people and ideas, and the manager must create the necessary attitude of sincere interest in people, for their work and shared goals of the organization. Otherwise, managers will continue to have problems with creating support, promote ownership of the products or ideas, with the transfer of a shared vision and commitment to build out-put quality of their decision. Having in mind the needs of a competent performance of managerial functions and the three remaining groups of skills will be the subject of education and training, depending on the category of managers for which programs will be designed. The following areas are allocated as a priority.

Training in **information management** will be essential if we want to have effective management of small, gradual and large non continuous changes. Managers will need to have skills and abilities such as flexibility, adaptability and creativity for development of new solutions, new ideas, processes, products or services. They will have to understand the changes as opportunities, not as a threat, and have the attitude that tolerates risk, encouraging experimentation, given the possibility of lower levels to share ideas and innovations (7).

Otherwise, it will persist and continue the problems such as viewing only one side of the conflict, failure to recognize the subtle signs which does not become apparent until the problem is not lost opportunity for optimal response. Managers will be able to promptly and appropriately respond to changes or to act with disregard of available information.

As a priority, managers must improve **knowledge and skills of information gathering**. It is easier to establish information channels in the organization and develop “integrative relationships” for the transmission of information across organizational boundaries and have a better sense of political information on the existing shares in an issue. Health care managers must also improve the **analysis of information** in order to be able to

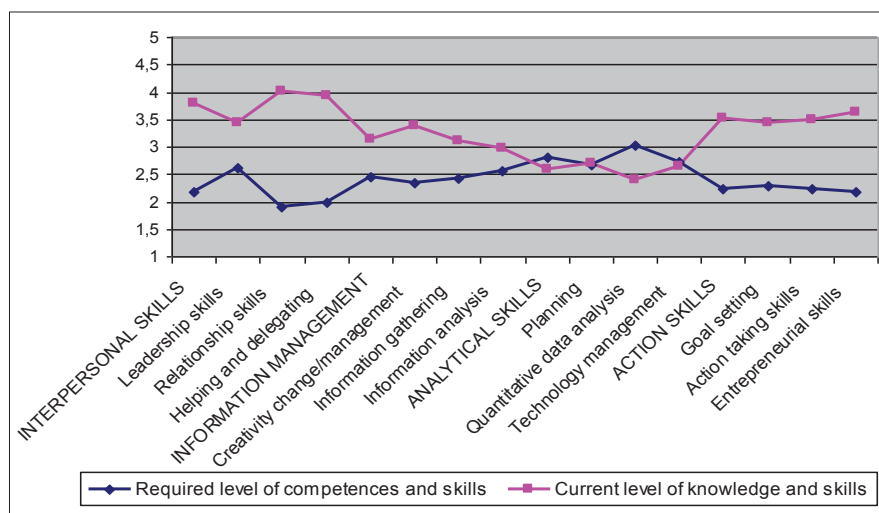


Figure 2. Priority areas for education

“draw” the meaning of technical or business materials and enhance the skills and deductive reasoning skills aggregation. Should also have adequate computer skills and use computers for information management.

Another priority area in which managers need additional experience/skills to effectively perform their job is the area of **analytical skills** that will enable them to use and assimilate new information and to use them for planning purposes or for creating a system of planning. In this group priority should be the education of the **analysis of quantitative data** in order to enhance the knowledge and ability to use analytical tools/techniques from functional disciplines (such as finance, marketing, operations management), statistics and computers to analyze information (8). (Figure 2).

Following is the **skill of technology management** that helps the management of the means by which the job is done: the use of machinery and equipment installed and accepted processes of technological improvements.

Improvement needs also the **planning skills** or determining the most important goals of the organization and plans for achieving those goals. The basic function of planning is conceptual and analytical ability, the ability to think about strategies and select those strategies that determine the direction of the organization and incorporate methods, approaches and structures in the official plans.

Despite a slightly higher level of knowledge and skills that managers are presented in the group of **action skills** they will certainly need further improvement because of the importance they have in overall functional unity of health managers.

This primarily relates to the **skill of establishing goals**—ability to establish performance standards, goals for themselves and for others, devote resources for accomplishing these goals, to measure progress in achieving goals and evaluate results. **Skills to take action**, also, should be improved so that an individual using these skills to initiate action: communicate, propose, held meetings, organize or direct – in order to perform a task. Education and training in entrepreneurial skills will improve the skill set that an individual uses to introduce new ideas that solve problems or introduce new

products (6).

4. DISCUSSION

Different managerial positions with accompanying functions require different combinations of skills. Several factors define the number, type and combination of individual skills and competences required for an individual managerial position, for example, a certain position requires analytical skills more than interpersonal skills. In the context of health manager, priority factor is the level of a managerial position in the health care organization. The next factor is the level of health care to which a certain health institution belongs. The

higher the managerial position, the higher the likelihood that the job will be more complex and demand a higher number of skills (9, 10, 11).

In conclusion, the fact which poses itself is that the managers interviewed, in using interpersonal skills, i.e. affective skills which allow them to work with others, rely more on relationship skills and helping and delegating skills, then on the use of formal leadership authorities resulting from their functions (6).

Among other priority skills, entrepreneur skills, taking action and determining goals skills, i. e. action skills, stand out. The conclusion can be drawn that managers, in order to fulfill their responsibilities in a competent manner, have to be equipped with the ability to determine goals and standards, to allocate resources and assess the performance, to accomplish set goals, and to work with limited resources and within time constraints (12).

Scales of skills which are the least required of health managers belong to the group of analytical skills, that means interviewed managers rely insufficiently on recognition/thinking skills which allow them to use and assimilate new information and to use those information for planning or creating planning systems.

Results of the research related to the assessment of the level of managerial knowledge and competences show that that the most inadequate knowledge and skills can be found in the group of analytical skills. Although health managers in their clinical practice use so-called high-technology for diagnostic and therapeutic purposes, evident is the absence of its use and understanding of its importance in health management or at least in its major part.

In the forthcoming period, the majority of health care organizations will have to be reorganized, there will be the reduction of resources, i.e. “adjusting to a proper level”, as well as the reengineering of the process, and all of it in order to be able to deal with decreased financing and, at the same time, satisfy the needs and expectations of clients (13, 14).

Identification of issues facing health managers in their efforts to pursue continuous education and professional

development will help to achieve progress in meeting managerial needs and the needs of the future health care industry.

5. CONCLUSIONS

Results of the research provides theoretical and practical contribution to the further academic and professional development of health managers in the BIH setting through documenting comprehensive information on knowledge and skills required for a competent performance of managerial functions.

This research also presents a clear profile of necessary managerial skills and competences which are required from health managers in performing their own functions, and it also presents a preliminary model of core competences and skills characterizing a competent health manager. Systematic assessment of the level of competences in relation to demands represents a true contribution of this study. Based on the identified areas, this research consequently allows the identification of primary areas in health management from which the education and development is needed in order to improve determined skills and competences.

Furthermore, the obtained results allow for the development of effective and efficient programs which will meet estimated needs for continuous education and development in health management. They also provide an opportunity to identify key managerial competences which are specific for the specific categories of managers.

However, an ultimate contribution of this research study should be the improvement of the health status of population as a basic indicator of the quality of functioning and organization of health care system.

REFERENCES

1. Stephen M, Shortell Arnold D, Kaluzny. Health care management: Organization design and behavior 4th ed., New York, 2000.
2. The World Bank. Project Appraisal Document for a Basic Health Project in BIH. New York, 1999.
3. Williams S, Ewell C. Medical Staff Leadership: A National Panel Survey. Health Care Management Review. 1996; 21(2): 29-37.
4. Federal Ministry of Health. Strategic plan for the reform and reconstruction of health care system in the Federation of Bosnia and Herzegovina for the middle-term period. Sarajevo: Federal Ministry of Health, Sarajevo, 1998.
5. Weber RA, Management: Basic Elements of Managing Organisations, Rev.Ed. Homewood III. Richard D. Irwin Incorporation, 1979.
6. Bauford BL, Rakich J, Darr K. Managing Health Services Organizations and Systems 4th edition, Career Development: A professional and Personal Responsibility. The Journal of health Administration Education, 1993; 11(2): 287-292.
7. Williams SJ. What skills do physician leaders need now and in the future? Physician Exec, 2001; 27(3): 46-48.
8. Ramano M. Ready Or not. Talented, high achieving physicians often come up short in the skills and other attributes needed to excel as CEO. Mod Health. 2004, 26; 34(17): 26-8.
9. Dawson S, Mole V, Winstanley D, Sherval J. Managing in the NHS: a study of senior executives. HMSO, London, 1995.
10. Winstanley D, Winstanley J, Woodall. Management Development, Human Resources Management in Action S. London, 1998.
11. Slipičević O, Results of Delphi Study on Priorities in Education in Health Management, Acta Inform Med, 2005; 13(2): 85-88.
12. Pollard JW, Guthrie MB, Gaintner JR. Development of a local Physician Executive Leadership Program, Physician Exec. 1998; 24(4): 62-66.
13. Ransom S, Sucession planning is vital new skill for physician executives, University of Michigan, USA, Physician Exec. 2003 Mar-Apr; 29(2): 59-60.
14. Zismer DK, Flygenring B, Campion B, Physician-led: good idea or not?, Mineapolis Hearth Institute, Abbot Northwestern Hospital, USA, Physician Exec. 2002 Sept-Oct; 28(5): 20-23.
15. Brook V, Hudak R, Finstuen K. Management competencies required in ambulatory care settings. Physician Exec. 1998 Sept-Oct; 24(5): 32-38.
16. Richard B. Saltman, Josep F, and Constantin S. Critical chalanges for health care reform in europe, London,1997.