

IMPROVING THE QUALITY OF HEALTHCARE SERVICES THROUGH TRAINING LEADERS

YULIIA LUKHANINA,¹ OLEKSANDR LUKHANIN,¹
EVA JEREB²

¹ Faculty of Organizational Sciences, University of Maribor, Kranj, Slovenia
yulii.lukhanina@student.um.si, oleksandr.lukhanin

² Department of Personnel and Education, Faculty of Organizational Sciences,
University of Maribor, Kranj, Slovenia
eva.jereb@um.si

Abstract One of the key components of quality medical services is competent management and leaders in healthcare. Unfortunately, most managers do not have professional knowledge and skills in their positions, as they come to healthcare management through clinical experience. Since the course of management is not included in the training program for medical specialists. The purpose of the work is to identify the key competencies of a successful leader and possible methods of training. The Web of Science, CHINAL, PubMed, Sage databases were searched to identify peer-reviewed papers relating to health care manager and leader competencies and teaching methods. Most managers in health care have a medical education and they lack of management skills and competencies. So they must be specially trained in the management of health and social organizations in order to know and understand the many processes occurring in health care and the impact of these processes on the quality of medical care. To achieve this goal, it is necessary to provide training in the management of clinical specialists or to include a management program for medical graduates.

Keywords:

healthcare services, quality, leaders, competencies, training

1 Background

The wealth of a nation is often influenced by the health of its citizens, which is why healthcare as an industry is developing rapidly, and the processes of providing healthcare services are becoming more and more popular (Wright, Gardner, Monynihan, & Allen, 2005). In discussions about universal health coverage, access to health is often a vital element overshadowing the understanding that health can only be improved if the services available are also of high quality (Busse, Klazinga, Panteli, & Quentin, 2019). Due to the increasing competition in the healthcare sector, medical organizations pay great attention to providing quality medical services. It is quality that becomes the core of the business strategy of any healthcare organization. Quality and care are the main factors distinguishing one healthcare facility from another (D'Cunha & Suresh, 2015).

The quality of health care is one of the most frequently cited health policy principles and is currently at the top of the policy agenda at national, European, and international levels (WHO, 2018). The health of the population depends on the quality of medical care, quality is what the patient wants at any level of medical care, and the patient's perception of the quality of service has a positive effect on patient satisfaction (D'Cunha & Suresh, 2015). Quality care is health care that is effective, safe, and meets the needs and preferences of patients. In other words, quality medical services around the world must be: effective - providing evidence-based medical services to those who need them; safe - preventing harm to the people for whom the care is intended; people-centered - providing care according to individual preferences, needs, and values of the patient (WHO, 2018). For the implementation of quality medical care, it is necessary to rely on the following elements of the quality of medical care: efficiency, effectiveness, availability, fairness, acceptability, and safety (WHO, 2006). Quality elements such as acceptability (i.e., patient satisfaction, perceived quality of care and communication) and safety (i.e., minimizing risks or harm to patients) characterize the direct work in the direct interaction of medical personnel with patients since the communication and care of medical personnel and patients is of fundamental importance in healthcare (Dewa, Loong, Bonato, Trojanowsk, & Rea, 2017). At the same time, the elements of quality such as efficiency, accessibility, and fairness characterize to a greater extent the health care system as a whole, for example, infrastructure, availability of equipment and medicines, the condition and equipment of specialized premises, and state

equipment in general. These quality elements play an important role in the health care system; however, they are secondary (Wallace, Lemaire, & Ghali, 2009). It was noted that quality consists of two interrelated parts: quality in reality and quality in perception. Reality means how quickly physiological clinical results were achieved and perception of how the patient evaluated the approach of medical personnel to fulfill their obligations, quality in perception means whether the methods of treatment and care meet the patient's expectations (D'Cunha & Suresh, 2015). In healthcare organizations, it is essential not only to quickly achieve typical physiological indicators or established quality standards in healthcare International Organization for Standardization (ISO) 31000, which manifests itself in hospitalization times, rehabilitation periods, achieving clinical physiological results, excluding or minimizing complications or disability, re-hospitalization but also to do it with an individual approach to each patient, providing great attention and a sense of compassion in the provision of medical care (Dewa, Loong, Bonato, Trojanowsk, & Rea, 2017).

Effective organizational skills such as leadership, management model, and culture are essential ingredients for improving the quality of healthcare facilities and act as catalysts for accreditation programs (Bernardes, et al., 2020). Leaders play a leading role in health care management. Since medical organizations are complex and face challenges due to the internal and external environment, the need for leadership qualities of managers at all levels of the organization has become paramount (Buchbinder & Shanks, 2017). Leaders foster greater participation and the creation of democratic processes that enable team integration, a more cooperative and integrated workspace, emphasize communication, trust, participation, and autonomy in selecting their leaders (Bernardes, et al., 2020). Successful organizations that demonstrate solid operational performance depend on strong leaders. Leadership development is defined as educational and skills development activities designed to improve the leadership ability of individuals. Similarly, leader development serves to enhance leadership skills and behavior and provides stability within organizational talent and culture through career advancement and succession planning. Finally, the Unified Health Care System leadership development program has increased market share, decreased employee turnover, and improved key quality indicators (Buchbinder & Shanks, 2017). But leaders need to be developed and trained, under the guise of any convenient programs like training, mentoring, and coaching, improving the qualifications of people in the development of leadership skills. In

this way, participatory models can help leaders socially construct communication and interaction with patients to fulfill their functional responsibilities in health care settings and increase patient satisfaction and overall quality of health care services (Bernardes, et al., 2020).

Our study aimed to examine which competencies healthcare leaders need to ensure quality healthcare services and which training is necessary to achieve these competencies. The following questions were posed:

RQ 1: Which competencies do healthcare facilities leaders need to enhance the quality?

RQ 2: What types of training are most common to achieve these competencies?

2 Methodology

A descriptive research method of work and a systematic approach to searching for literature were used when constructing the theoretical part of the research work (Sekaran & Bougie, 2016). In addition, a descriptive review was carried out to find which competencies healthcare leaders need to ensure quality healthcare services and which training to propose to achieve these competencies.

We carried out a systematic review followed by a thematic synthesis (see Thomas & Harden, 2008). We followed The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for reporting (Page, McKenzie, Bossuyt, Boutron, & Hoffmann, 2020).

2.1 Search strategy

We systematically searched the literature in the following databases: Web of Science, CHINAL, PubMed, Sage. We also searched for the grey literature via hand-searching. In the search, we used the following keywords: healthcare or health services, quality of care, management training, managerial competencies with the help of the Boolean operators (AND, OR). The search strategy was: ("health services " OR healthcare) AND "management training " AND "quality of care" AND ("managerial competencies" OR "leader competencies"). The background for this

work was research articles in English published up to January 2022 that focus on what competencies a leader should have and how it is possible to train leaders in these competencies (Table 1).

Table 1: Table Inclusion and exclusion criteria for the literature search

Databases	Web of Science, CHINAL, PubMed, Sage	
	Inclusion criteria	Exclusion criteria
Population	Healthcare professionals	Patients, care partners, public
Intervention / treatment	Relevant leaders competences in healthcare	Articles do not assess the relevant leaders competences in healthcare
Outcomes	Articles assess based on the relevant leaders competences in healthcare	Articles do not assess the relevant leaders competences in healthcare
Types of research	Quantitative research, qualitative research, research of mixed methods	Systematic reviews or other types of transparent articles and duplicates, protocols, conferences, editorials and not research articles
Limits		
Time frame	Until January 2022	
Language	English	

The extraction of final selection data included authors, year, country, purpose, research methodology/methods, sample, and main findings. Disagreements were resolved based on discussion and consensus. Data synthesis was made based on a thematic theoretical framework. By following the steps, we first synthesized the data obtained from the final selection of transparent articles. We organized them into a descriptive primary sub-theme and analyzed them to develop a secondary theme.

2.1.1 Search outcomes

One thousand eighty-two records were retrieved from the Web of Science, CHINAL, PubMed, Sage databases. With the help of the Mendeley program, 11 duplicates were eliminated. The following 1038 articles were excluded after reading the abstract of the article. It was necessary to become acquainted with ten works in total. Figure 1 shows the exact sequence of the article selection process, excluding articles at each search stage. In conclusion, ten studies were selected for further work, which provided answers to the research questions of this work.

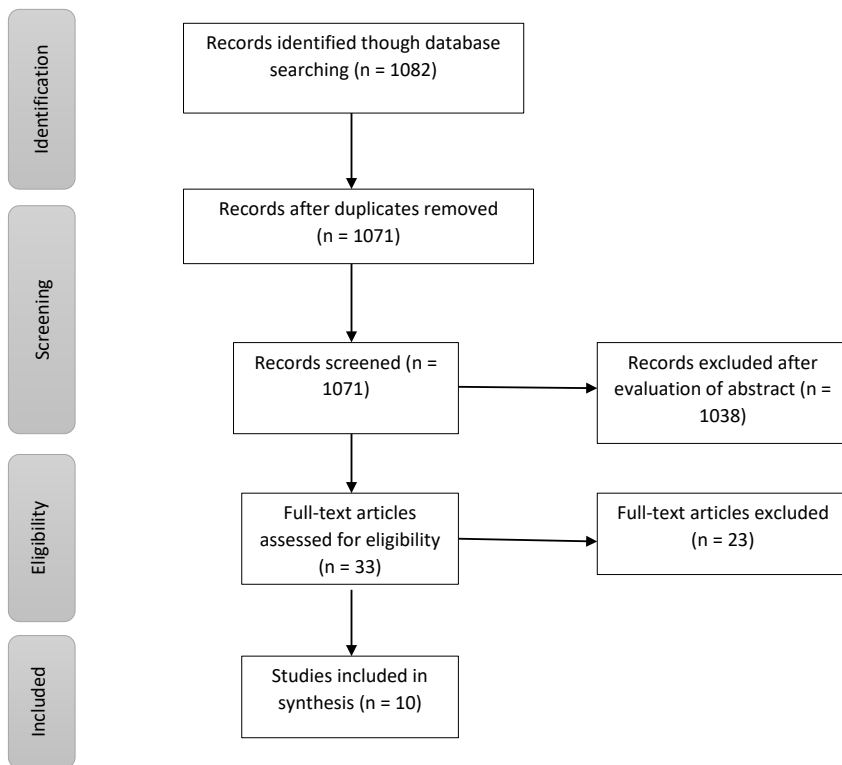


Figure 1: Flowchart for finding relevant articles

3 Results

We divided the selected articles into two groups: the first (Table 2) shows what competencies a successful leader needs. The second (Table 3) shows which training leaders need to increase their competencies.

Table 2: Competencies that successful leaders should have

Author Year Country	Methods	Aim	Sample Size	Main Result
Barati, Sadeghi, Khammarnia, Siavashi, & Oskroch 2016 Iran	qualitative study	This study aimed to identify the skills and competencies that hospital managers must demonstrate to achieve their objectives	n = 24 managers	Eight key skill themes (communication, experience, facility logistics/infrastructure assessment, managerial skills, motivation, systematic problem solving, ethics, and financial/legal awareness) were identified among hospital managers. In the study cohort, practical skills such as communication and experience were considered more important than theoretical skills for effective hospital management and administration.
Dorji, Tejavivaddhana, Siripornpibul, Cruickshank, & Briggs 2019 Bhutan	mixed methods	This study aims to identify the required management competencies, current competency levels, and strategies for improving the management	n = 339 primary health care managers	People domain was perceived as the highest required competency with a mean score of 4.23, followed by execution (4.18) and the transformation (4.05) domains. For the seven key sub-domains, the communication sub-domain (4.32) was

Author Year Country	Methods	Aim	Sample Size	Main Result
		competencies of Bhutanese primary health care managers		perceived as the highest required competency, followed by professionalism (4.29), managing change (4.17), relationship building (4.16), analytical thinking (4.10), leadership (4.09), and innovative thinking (3.97).
Fanelli, Lanza, Zangrandi & Zangrandi 2020 Italy	mixed methods	Identify specific managerial competencies that healthcare professionals consider critical to improving their performance	n = 1500 healthcare workers	Main competencies are a quality evaluation based on outcomes; enhancement of professional competencies; programming based on process management; project cost assessment; informal communication style; and participatory leadership.
Ofei, Paarima, & Barnes 2020 Ghana	quantitative exploratory design	this study examined important management competencies significant for healthcare delivery	n = 522 nurses	The study identified technical, human, and conceptual skills essential for nursing management in Ghana.
Van Tuong & Duc Thanh 2017	mixed-method study	This paper aimed to develop	n = 101 participants	The essential managerial competencies for

Author Year Country	Methods	Aim	Sample Size	Main Result
Vietnam		leadership and managerial competency framework for public hospital managers in Vietnam		public hospital managers include policy development and implementation; strategy development and orientation; plan-making; human resource management; financial management; equipment and infrastructure management; information management; risk and disaster management; self-management; quality management; investigation; supervision; monitoring and evaluation; ethics knowledge. These are necessary competencies if managers are to fulfill their tasks effectively.

Table 3: Training that can increase leaders' competencies

Author Year Country	Keywords	Main Result
Ochonma & Nwatu 2018 Nigeria	Hospitals, Managers, Training, Informal, Formal, Need, Abuja, Nigeria	The authors establish the critical need for formal and informal training in health management for health care managers. Emphasis on training should be directed to younger managers who are the least likely to acquire such training, smaller and private hospitals who are less likely to encourage such training amongst their staff, and the least educated amongst health managers.
MacVarish, et al., 2018 England	Management, training, workforce, Public Health 3.0	Management training offers the hope of increasing professionalism, creating better, more effective workplaces and programs, and preparing practitioners for an evolving public health landscape. Early results indicate that NEPHTC's program, <i>Managing Effectively in Today's Public Health Environment</i> , helps realize that hope.
Gopolang, et al., 2020 Zambia	Leadership; quality management; workforce development	This program taught leadership theory to laboratory managers and allowed them to implement leadership and management practices in the laboratory setting. These programs complement existing laboratory quality management training programs such as <i>Strengthening Laboratory Management Toward Accreditation</i> .
Mutale, et al., 2017 Zambia	Leadership, training, management, healthcare	Leadership and management training will be a key ingredient in health system strengthening in low-income settings. The ZMLA model was acceptable and effective in improving knowledge and skills for health system managers with minimal disruption to health services.
Hanley, Sowder, Palmer, & Weiss 2016 USA	Competencies, graduated responsibility, laboratory management, pathology residency	A survey of current and recent assistant medical directorship participants revealed that the assistant medical directorship program serves as an excellent means of improving laboratory management skills and improving performance as a fellow and practicing pathologist.

Authors Barati, Sadeghi, Khammarnia, Siavashi, and Oskroch (2016) conducted their qualitative research in Iran. They aimed to identify the problems faced by local hospital management and the skills that managers could quickly and effectively deal with the issues that arose. One of the main competencies that a manager should have is knowledge of understanding the processes that take place every second in healthcare organizations. Communication is also considered an essential factor through which the manager can maintain a healthy working environment, increase staff motivation, resolve emerging conflicts and satisfy all parties of the conflict. Therefore, the authors suggest that emphasis should be placed on hands-on skills-based learning for health management students to better deal with real-world problems (Barati, Sadeghi, Khammarnia, Siavashi, & Oskrochi, 2016). The authors Dorji, Tejavivaddhana, Siripornpibul, Cruickshank, and Briggs (2019), who conducted their research in Bhutan, came to similar conclusions that the primary skill of a leader in healthcare is professionalism. The health manager must know how the system functions and its components. The factor of communication and building relationships is also significant. This is important because healthcare involves working with people of different ages, professional skills, and intelligence. It is these skills when used by the leader, that can lead the organization to achieve the goals that are the high quality of providing safe medical care. Of course, other factors such as leadership, the ability to think analytically, and transform are also essential (Dorji, Tejavivaddhana, Siripornpibul, Cruickshank, & Briggs, 2019). Fanelli, Lanza, C. Zangrandi, and A. Zangrandi (2020) concluded that the core competencies in healthcare management are: results-based quality assessment; improving professional competencies; programming based on process control; project cost estimate; informal style of communication; and participatory leadership. But if we briefly characterize these competencies, we will get the same conclusions as in the work of Barati, Sadeghi, Khammarnia, Siavashi, and Oskroch (2016) and Dorji, Tejavivaddhana, Siripornpibul, Cruickshank, and Briggs (2019), that the core competencies are professionalism in healthcare organization and communication skills. Ofei, Paarima, and Barnes (2020) study explored important managerial competencies in healthcare delivery. The authors concluded that health care delivery is multifaceted, and to minimize errors and reduce and avoid confusion, technical skills or professionalism are identified as a prerequisite. The authors of other papers came to the same conclusions. Technical skills or professionalism are needed for supportive supervision to ensure that things are done right and the right thing is done through the transfer of adequate knowledge, skills, and attitudes or

competencies. Human relationship skills, communication, and leadership also play a leading role in health care competencies that enable them to work well and get along with others. This has been linked to staff and patient outcomes (Ofei, Paarima, & Barnes, 2020). The authors Van Tuong and Duc Thanh (2017) conducted a study whose purpose was to develop a system of leadership and managerial competencies for managers of public hospitals in Vietnam. These competencies include policy development and implementation; strategy development and orientation; planning; human resource management; financial management; equipment and infrastructure management; information management; risk and disaster management; self-management; quality control; study of supervision; monitoring and evaluation; knowledge of ethics. These are essential competencies if managers are to perform their tasks effectively and will be used as the basis for developing competency-based training for the current management team and training future hospital leaders (Van Tuong & Duc Thanh, 2017).

Ochonma & Nwatu 2018 demonstrate that health managers do not have a proper education in management and thus have no idea about leadership as a science, and even more so as a tool to achieve the organization's goals. Often experienced clinicians become Nigerian health managers. Therefore, health care cannot globally deal with its challenges to solve these problems. The authors also demonstrate the need to address the lack of managerial training among leaders in Nigerian health care and recommend short, term courses in hospital management and economics in short term and its inclusion in the curriculum of university programs for the preparation of young professionals (Ochonma & Nwatu, 2018). MacVarish, et al. (2018) note that management training is often overlooked in many areas in which practitioners become managers in particular healthcare, which is essential in job performance, staff satisfaction and performance, and quality improvement. Since today's healthcare needs much more complex teamwork, coordinated efforts to build fundamental high-performance skills and abilities, and the development of managerial leadership skills with a policy of persuasion development and systems thinking for an effective quality improvement coalition in healthcare. For this purpose, a low-cost, time-consuming, but highly effective course was created with assignments and activities, slides, and detailed instructor notes. The original version had 14 sessions - 2 face-to-face days of classes and 12 two-hour interactive webinars. The course provides knowledge about management, its functions, and means to achieve its goals, types of leadership, motivation, culture, functions of the personnel

department, and planning and strategy (MacVarish, et al., 2018). Gopolang, et al. (2020) indicate that the laboratory, as a fundamental element of healthcare, also needs leaders to provide quality laboratory services through the rational use of resources in a changing healthcare environment and develop the ability to be flexible and efficient in difficult situations. However, the leaders have only the particular knowledge and skills of laboratory technicians, the knowledge obtained from academic training programs. This is insufficient and indicates the need for additional education in the management course in health care. An interactive Strengthening Laboratory Management Toward Accreditation (SLMTA) training program for laboratory staff and obtaining accreditation from the World Health Organization was proposed. This program is aimed at improving leadership qualities and laboratory quality management skills, improving their competence in the field of management, communication, policy development, data analysis, and international quality management principles to improve the ability to deliver quality clinical services. The duration of the program is up to 12 months (Gopolang, et al., 2020). Mutale, et al. (2017) are convinced that any training for health leaders will positively affect health care in Zambia as a whole since there is no management and leadership course for medical students at all. It is recommended to conduct a program of activities such as seminars, thematic discussions, studies, and mentoring, which will increase motivation for work, improve communication skills, and improve behavior. However, the authors are convinced that this is not enough and proposes to conduct management and leadership courses, which will allow to acquire the necessary knowledge in the field of leadership skills management, planning and healthcare strategies, as well as to use them correctly in everyday duties, depending on the position held. The duration of the courses is from 6 to 12 months (Mutale, et al., 2017). Hanley, Sowder, Palmer, and Weiss (2016) argue that healthcare professionals are now required to have specific clinical knowledge and skills and specific managerial knowledge and skills to be leaders and stewards of resource use. Leaders experts note their shortcomings in management skills, interpersonal interaction, conflict management issues. It is these gaps in knowledge and skills that the health management training program, the ARUP program developed by the faculty of the University of Utah, has to fill in 12 months, where much attention is paid to the subject of management, its function of principles, methods for achieving goals, efficiency and productivity. With this knowledge, new managers will be able to effectively meet the challenges of a dynamic healthcare environment (Hanley, Sowder, Palmer, & Weiss, 2016).

4 Discussion

High-quality medical care can be achieved only with the hard and fruitful work of the entire team, not only medical specialists and nurses, but also the management of the organization (Ochonma & Nwatu, 2018). Health managers do not work with patients, but they significantly influence the quality of healthcare through the development of an effective strategy for the institution, the appropriate and justified allocation of resources, the creation of a culture within the organization, and competent and fruitful work with human resources.

However, in most countries of the world, the quality of healthcare has serious problems, since the management of healthcare organizations is not professionally trained to perform their functions and tasks, the authors of the works Ochonma & Nwatu, (2018), Gopolang, et al., (2020) found confirmation, which of course is not able to improve the quality health care services as there is a lack of coordination and consistency of staff, overspending of resources and problems with staff, which further exacerbates the problem in health care (Ochonma & Nwatu, 2018; Gopolang, et al., 2020).

This happens only because medical specialists become managers in health care who do not have proper training in management and management. Since in most cases, the course of management in health and social organizations is not included in the medical training program (MacVarish, et al., 2018; Ochonma & Nwatu, 2018), i.e. medical professionals, trained and able to perform their duties as clinicians to a high level, are not able and do not have knowledge in the management of the organization and work with personnel. That is why they are not able to build an organization's strategy, a sequence of steps to achieve the goal, create a culture in the organization and a healthy working environment for employees.

We clearly see the need to train leaders and managers in healthcare organizations in the course of management and personnel management, which will ensure higher quality standards in organizations under their control. The authors MacVarish, et al., (2018), Mutale, et al., (2017), Hanley, Sowder, Palmer, & Weiss (2016) show us how quality indicators in healthcare organizations have changed positively after studying the management course by managers (MacVarish, et al., 2018; Mutale, et al., 2017; Hanley, Sowder, Palmer, & Weiss, 2016). Having received high quality results, the

management course was included in the training program for medical students (Hanley, Sowder, Palmer, & Weiss, 2016).

To train medical professionals in management, they resort to various methods, such as thematic lectures, seminars, mentoring and specialized courses. In our opinion, all of the above methods are able to give knowledge and understanding of management, however, specialized courses in the management program can boast of the best results, our opinion is based on the results of the authors (MacVarish, et al., 2018; Hanley, Sowder, Palmer, & Weiss, 2016). Specialized courses allow you to fully immerse yourself in the subject of management and comprehensively consider the issues of managing an organization and managing human resources.

It is impossible not to mention the competencies that managers and leaders in healthcare organizations should have in order to ensure high quality indicators. The authors Barati, Sadeghi, Khammarnia, Siavashi, & Oskrochi, (2016), Dorji, Tejativaddhana, Siripornpibul, Cruickshank, & Briggs, (2019) argue that the main skill for managers and leaders in healthcare is communication skill (Barati, Sadeghi, Khammarnia, Siavashi, & Oskrochi, 2016; Dorji, Tejativaddhana, Siripornpibul, Cruickshank, & Briggs, 2019). Based on our experience in healthcare organizations in different countries, we can say that communication is one of the main tools that is present in healthcare. However, the level of communication is negligible, since people with different levels of education (doctors, nurses, assistants and support staff), gender, age, professional training and religion are united within the healthcare organization, which leads to misunderstandings not only within the organization but also between medical professionals and patients. The skill of good communication will allow you to erase misunderstandings between employees, convey the necessary information to everyone and be sure that the information is understandable, despite the difference in education, experience, religion. Which, in turn, can also positively influence the quality of medical services.

Other authors Fanelli, Lanza, Zangrandi, & Zangrandi, (2020), Van Tuong & Duc Thanh, (2017) argue that leadership in healthcare requires managerial skills (Fanelli, Lanza, Zangrandi, & Zangrandi, 2020; Van Tuong & Duc Thanh, 2017). It is impossible to argue with this, since the manager's skills allow the leader to organize the process, involve the right people to perform specific tasks, create a comfortable

working atmosphere, motivate and lead followers to achieve the goals of the healthcare organization, provide quality medical care and patient satisfaction.

Also an important competence is the professionalism and experience of leaders in healthcare (Ofei, Paarima, & Barnes, 2020), since for successful and fruitful management in a healthcare organization, a manager must know and understand all those multiple processes that occur in a healthcare organization when working with patients, and in any difficult situation was able to quickly understand the problem and make the right decision in a difficult situation, which will maintain a healthy working atmosphere within the organization and positively affect the quality of medical services and patient satisfaction.

5 Conclusion

Health care is an important element of the social life of the population, but today health care is facing difficulties that require new approaches to management and decision-making. That is why it is very important that the administrative staff of health care have knowledge of management, modern management methods, efficiency and management trends in the modern world.

Managers in health care must be specially trained in the management of health and social organizations, while having a medical education, in order to know and understand the many processes occurring in health care and the impact of these processes on the quality of medical care. To achieve this goal, it is necessary to provide training in the management of clinical specialists or to include a management program for medical graduates.

Further research is needed in the following directions, to determine the best management training program in health care, and to determine which managers are best able to achieve success, clinicians who have received management training or students taking a course in a management program at a medical school.

References

- Barati, O., Sadeghi, A., Khammarnia, M., Siavashi, E., & Oskrochi, G. (2016). A qualitative study to identify skills and competency required for hospital managers. *Electronic Physician*, 8(6), 2458-2465.
- Bernardes, A., Gabrie, C., Cummings, G., Zanetti, A., Leoneti, A., & Caldana, G. (2020). Organizational culture, authentic leadership and quality improvement in Canadian healthcare facilities. *Brazilian Nursing Journal*.
- Buchbinder, S., & Shanks, N. (2017). *Introduction to health care management*. United States of America: Jones & Bartlett Learning.
- Busse, R., Klazinga, N., Panteli, D., & Quentin, W. (2019). *Improving healthcare quality in Europe. Characteristics, effectiveness and implementation of different strategies*. United Kingdom: World Health Organization and OECD.
- D'Cunha, S., & Suresh, S. (2015). The measurement of service quality in healthcare: a study in a selected hospital. *International Journal of Health Sciences and Research*, 332-345.
- Dewa, C., Loong, D., Bonato, S., Trojanowski, L., & Rea, M. (2017). The relationship between resident burnout and safety-related and acceptability-related quality of healthcare: a systematic literature review. *BMC Medical Education*.
- Dorji, K., Tejavaddhana, P., Siripornpibul, T., Cruickshank, M., & Briggs, D. (2019). Leadership and management competencies required for Bhutanese primary health care managers in reforming the district health system. *Journal of Healthcare Leadership*(11), 13–21.
- Fanelli, S., Lanza, G., Zangrandi, C., & Zangrandi, A. (2020). Managerial competences in public organisations: the healthcare professionals' perspective. *BMC Health Services Research*, 20(303).
- Gopolang, F., Zulu-Mwamba, F., Nsama, D., Kruuner, A., Nsofwa, D., & Kasvosve, I. (2020). Improving laboratory quality and capacity through leadership and management training: lessons from Zambia 2016–2018. *African Journal of Laboratory Medicine*.
- Hanley, T., Sowder, A., Palmer, C., & Weiss, R. (2016). Teaching laboratory management principles and practices through mentorship and graduated responsibility: the assistant medical directorship. *Academic Pathology*, 1-10.
- MacVarish, K., Kenefick, H., Fidler, A., Cohen, B., Orellana, Y., & Todd, K. (2018). Building professionalism through management training: new england public health training center's low-cost, high-impact model. *Journal of Public Health Management and Practice*, 479-486.
- Mutale, W., Vardoy-Mutale, A.-T., Kachemba, A., Mukendi, R., Clarke, K., & Mulenga, D. (2017). Leadership and management training as a catalyst to health system strengthening in low-income settings: evidence from implementation of the Zambia management and leadership course for district health managers in Zambia. *PLOS ONE*, 1-24.
- Ochonma, O., & Nwatu, S. (2018). Assessing the predictors for training in management amongst hospital managers and chief executive officers: a cross-sectional study of hospitals in Abuja, Nigeria. *BMC Medical Education*.
- Ofei, A., Paarima, Y., & Barnes, T. (2020). Exploring the management competencies of nurse managers in the Greater Accra Region, Ghana. *International Journal of Africa Nursing Sciences*.
- Page, M., McKenzie, J., Bossuyt, P., Boutron, I., & Hoffmann, T. (2020). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*(372), n71.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: a skill building approach*. 7th ed. New York: Wiley.
- Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8, 45.
- Van Tuong, P., & Duc Thanh, N. (2017). A leadership and managerial competency framework for public hospital managers in Vietnam. *AIMS Public Health*, 418-429.
- Wallace, J., Lemaire, J., & Ghali, W. (2009). Physician wellness: a missing quality indicator. *Lancet*, 1714-21.

- WHO. (2006). *Quality of care: a process for making strategic choices in health systems*. Geneva: World Health Organization.
- WHO. (2018). *Handbook for national quality policy and strategy – a practical approach for developing policy and strategy to improve quality of care*. Geneva: World Health Organization.
- Wright, P., Gardner, T., Mohnihan, L., & Allen, M. (2005). The relationship between HR practices and firm performance: examining causal order. *Personnel Psychology*, 409-66.