Success rate evaluation of clinical governance implementation in teaching hospitals in Kerman (Iran) based on nine steps of Karsh's model

Leila Vali[1], Zahra Mastaneh[2], Ali Mouseli[3,4], Vida Kardanmoghadam[5], Sodabeh Kamali[6]

[1] Ph.D. of Health Services Management, Assistant Professor, Environmental Health Engineering Research Center, Kerman University of Medical Sciences, Kerman, Iran
[2] Ph.D of Health Information Management, Assistant Professor, Social Determinants in Health Promotion Research Center, Hormozgan Health Institute, Hormozgan University of Medical Sciences, Bandar Abbas, Iran
[3] Ph.D of Health Services Management, Health Services Management Research Center, Institute for Future Studies in Health, Kerman University of Medical Sciences, Kerman, Iran
[4] Assistant Professor, Social Determinants in Health Promotion Research Center, Hormozgan Health Institute, Hormozgan University of Medical Sciences, Bandar Abbas, Iran
[5] M.Sc. of Health Services Management, Modeling in Health Research Center, Institute for Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran
[6] M.Sc. of Health Information Management, Medical Informatics Research Center, Institute for Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran

Type of article: Original

Abstract

Background: One of the ways to improve the quality of services in the health system is through clinical governance. This method aims to create a framework for clinical services providers to be accountable in return for continuing improvement of quality and maintaining standards of services.

Objective: To evaluate the success rate of clinical governance implementation in Kerman teaching hospitals based on 9 steps of Karsh's Model.

Methods: This cross-sectional study was conducted in 2015 on 94 people including chief executive officers (CEOs), nursing managers, clinical governance managers and experts, head nurses and nurses. The required data were collected through a researcher-made questionnaire containing 38 questions with three-point Likert Scale (good, moderate, and weak). The Karsh's Model consists of nine steps including top management commitment to change, accountability for change, creating a structured approach for change, training, pilot implementation, communication, feedback, simulation, and end-user participation. Data analysis using descriptive statistics and Mann-Whitney-Wilcoxon test was done by SPSS software version 16.

Results: About 81.9 % of respondents were female and 74.5 have a Bachelor of Nursing (BN) degree. In general, the status of clinical governance implementation in studied hospitals based on 9 steps of the model was 44 % (moderate). A significant relationship was observed among accountability and organizational position (p=0.0012) and field of study (p=0.000). Also, there were significant relationships between structure-based approach and organizational position (p=0.007), communication and demographic characteristics (p=0.000), and end-user participation with organizational position (p=0.03).

Conclusion: Clinical governance should be implemented by correct needs assessment and participation of all stakeholders, to ensure its enforcement in practice, and to enhance the quality of services.

Keywords: Clinical Governance Implementation, Karsh's Model, Top Management Commitment, End-user Participation

Corresponding author:

Dr. Ali Mouseli, Health Services Management Research Center, Institute for Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran. Tel: +98. 34 31325000, Email: mouseli136025@gmail.com

1. Introduction

In accordance with fundamental changes arising from major social, economic, political, and technological developments, healthcare organizations face the challenges of accountability, transparency, efficiency, equity, and quality of health services (1-3). Over the past 20 years, in the health systems of different countries, various methods and models have been implemented to meet these challenges and improve the quality of services, but many of them have been abandoned due to poor implementation and modeling (4). In addition, quality improvement requires change, but the existence of a wide range of factors at different levels has made changes difficult. In particular, due to complexity, resistance to change, diversity, and distribution of health system organizations, the implementation of quality approaches in this sector is more challenging than other sectors (5). Quality management through improvement of systems and business processes and using management techniques helps organizations to achieve optimum outcomes including improvement of service quality, customer satisfaction, and greater productivity (6). In this regard, Total Quality Management (TQM) was welcomed as a general pattern, but for reasons such as incorrect implementation, lack of support and commitment of senior management, inappropriate leadership and management style, lack of awareness and adequate knowledge of this method, lack of planning based on existing realities, lack of participation by employees and customers, as well as fear and resistance from managers and employees to change, it inevitably failed to achieve much success in health care organizations (7-13). However, in Iran, TQM has had some advantages for health care organizations (14-17), but it has failed to have continuous and consistent improvement in service quality, and drive the customers' continuous satisfaction and productivity of the organizations (18-21). Following this, some health care organizations, instead of focusing on the reasons for the failure of TQM, began to implement other models or techniques of quality management, including quality management models of America, quality management models of Europe, balanced evaluation of performance and other models which also failed to result in continuous improvement of services quality. One of the models that has been used from 2009 in Iran hospitals is the clinical governance model. The purpose of establishing this model is standardizing and improving the quality of clinical services with the highest efficiency and the lowest cost (22-25). In this regard, using the results of studies that have defined indicators to evaluate the success rate of TQM programs (26) or applying the principles outlined in the clinical governance strategy of National Health Services (NHS) can be helpful. In this strategy, more successful implementation principles of clinical governance are determining existing gaps and possible obstacles in the way of its realization, as well as ensuring the availability of necessary structures and processes (27). Clinical governance aims to merge all activities that occur in the course of clinical care and convert them to a single strategy. In other words, it aims to conduct an umbrella strategy to cover all issues which will help to maintain and improve standards of patient care (1). In this model, it is suggested that this action be incorporated by using a systemic step-by-step approach (data, process, and output) and by identifying all affecting factors in the establishment of its principles in hospitals and health care centers. Therefore, based on the mission of clinical governance, it is essential to examine its success rate in achieving the objectives defined by scientific and accurate methods, and if this model has flaws and shortcomings in implementation, they can be amended. This study sought to evaluate the success rate of clinical governance implementation based on the step-by-step scientific methods that are the nine-step model of Karsh in teaching hospitals in Kerman.

2. Material and Methods

This study was a descriptive and analytical study conducted by cross-sectional method in 2015. The setting of the study was four teaching hospitals affiliated to Kerman University of Medical Sciences. The study population (100 people) included all executive managers (4 people), nursing managers of hospitals (4 persons), directors of clinical governance (4 people), experts of clinical governance units (8 people), head nurses (20 people), and nursing staff (60 people) who were involved in clinical governance. In this study, a researcher-made questionnaire was used. The questionnaire consisted of two parts that the first part was about demographic information and the second part contained 38 questions in connection with the nine-step Karsh model including: top management commitment to change (3 questions), accountability for change (5 questions), creating a structured approach for change (3 questions), training (5 questions), pilot implementation (4 questions), communications (5 questions), feedback (5 questions), simulation (4 questions), and participation of end-users (4 questions). It is noteworthy to say that the Karsh model is a result of a systemic review by B T Karsh published in 2004. The main question was how designing and deploying new technologies such as Computerized Provider Order Entry (CPOE) can be effective in improving patients' safety. Karsh investigations on this question led to the designing of nine main issues (28). The validity of the questionnaire was confirmed by six people who were experts and professors of management and medical informing, and nursing and midwifery colleges. The reliability of the questionnaire was confirmed by Cronbach's alpha (86%). The questionnaire was designed by a three-point Likert Scale (good, moderate, and weak) for ratings that scored two to points for good, one point for moderate, and zero for weak. The score range of each questionnaire

was from 0 to 76 points. From 0 to 25 was weak, from 26 to 50 was moderate, and 51 to 76 was good. The questionnaires were completed after receiving the introduction letter from the university and referring to different parts of hospitals by two trained examiners. In addition, the participants were assured that the information would remain confidential. From the total number of 100 participants, 94 fully completed the questionnaire (response rate 94%). Questionnaires were classified without the names of participants and with the registration code related to each hospital. Data analysis was performed by using SPSS software version 16, descriptive statistics, and inferential statistics of the Mann-Whitney and Wilcoxon tests.

3. Results

In the present study, the participants' demographic information showed that 81.9% of them were female and 18.1% were male. In terms of qualification, 8.5% of them had Master of Science and 74.5% had Bachelor degrees. The rest of the participants had Associate of Science (5.3%) and high school Diplomas (11.7%). Most fields of study of the respondents (80.9%) were nursing, and the largest number of respondents (45.7%) were formally employed by the hospital. In general, of the status of clinical governance implementation in the studied teaching hospitals based on nine-steps, 44% were fair and 56% were poor. The success rate of each step of the model is shown in Table 1. There was no significant relationship between the commitment of senior managers to make changes and demographic factors (p=0.80). In the area of accountability to make changes, there was a statistically significant relationship between the organizational position (p=0.012) and field of study (p=0.000). Also, in connection with the need for a structure-based approach, there was a statistically significant relationship between that and organizational position (p=0.007). There was no significant relationship between education and demographic factors (p=0.80). There was a statistically significant relationship between communication and demographic characteristics such as education (p=0.01), age (p=0.000), organizational position (p=0.002) and field of study (p=0.000). There was a statistically significant relationship among feedback and organizational position (p=0.000) and education (p=0.002). End-user participation had a significant correlation with organizational position (p=0.03). In addition, there was a significant relationship between the participation of end user and organizational position (p=0.03). There was no significant relationship between pilot implementation and simulation with demographic factors (p=0.65), but it had a significant relationship with organizational position (p=0.002) and field of study (p=0.003).

Table 1. Success Rate of Clinical Governance Implementation based on Nine Steps of Karsh Model in Studied Hospitals

Nine Steps	Situation						Success Rate
	Weak		Moderate		Good		
	n	%	n	%	n	%	
Top Management Commitment to the Change	35	37.23	49	52.13	10	10.64	Moderate
Responsibility and Accountability Structure for the Change	36	38.30	50	53.19	8	8.51	Moderate
Structured Approach to the Change	45	47.87	43	45.74	6	6.38	Weak
Training	35	37.23	50	53.19	9	9.57	Moderate
Pilot Testing	55	58.51	35	37.23	4	4.26	Weak
Communication	36	38.30	50	53.19	8	8.51	Moderate
Feedback	50	53.19	40	42.55	4	4.26	Weak
Simulation	60	63.83	33	35.11	1	1.06	Weak
End User Participation	65	69.15	27	28.72	2	2.13	Weak

4. Discussion

The results showed that the overall success rate of clinical governance implementation, as well as its nine steps in the studied hospitals was moderate to weak. In this regard, the results of many studies have emphasized the commitment of senior managers to make changes based on the principles and steps of clinical governance and also the participation of end-users, and mentioned these two important factors as the main factors of success or failure of its implementation. In the present study, the commitment of managers was moderate and the participation of end-users was weak. The results of Singh in 2009 in the United Kingdom showed that successful implementation of clinical governance requires serious involvement of managers and employees (29). In addition, Braithwaite in 2008, showed in his study that a comprehensive approach to clinical governance requires the active participation of senior and executive managers of organizations and also end-users to support it as a quality strategy (30). Sedaghat also, in his study in teaching hospitals of Tehran University of Medical Sciences, expresses the participation of end-users as

an important factor in the survival of clinical governance after the establishment (31). Having a comprehensive approach, and the fact that all people at all levels of the hospital should do their duties based on their role and position can lead to comprehensive commitment of participants as a guarantee of comprehensive and successful implementation of clinical governance. Therefore, as senior managers' commitment can be the initiator of implementation activities of clinical governance in hospitals; what this commitment guarantees in the success of these activities, is the participation of its performers, who are the end-users.

Training programs before the implementation of clinical governance, based on the results of this study were moderate. The results of the NHS study proposed presenting training programs before implementing clinical governance as requirements for setting up this system (32). Braithwaite, in his study in England, expressed lack of adequate training for users and lack of knowledge in people involved in critical thinking in dealing with obstacles as the failure factors of clinical governance implementation (30). Atapour, in his study, mentioned lack of training before implementation as obstacles and challenges of clinical governance implementation (33). Hall, in his study, concluded that despite a positive view to implementation of clinical governance, a lot of people participating in it lacked the capabilities and knowledge in this field, that even their interpretation of clinical governance was different (34). It seems that hasty implementation of clinical governance before the involved people have been trained, is a failure factor of it. Therefore, in order for clinical governance to be accepted by whom whoever wishes to undertake its implementation, it should be first ensured that they have sufficient training. The results showed that creating a structured approach to change in the studied hospitals was weak. Sohrabi, in his study, stated there being no structured approach to change as the problems and obstacles in the way of clinical governance implementation in hospitals of Iran University of Medical Sciences (35). The study by Freedman in 2002 showed that existence of a structured approach to change in implementation of clinical governance successfully is necessary, and in order to create organizational structure and culture for its implementation, staff should have a positive attitude to that and show less resistance to its implementation (36). According to the results of the present and the other conducted studies, lack of structured approach can be due to the lack of systemic thinking in hospitals and health care institutions and this issue leads to fail on the way to implement clinical governance. Accountability for the changes in the present study was moderate. Freedman (2002) in his study in the UK showed that accountability for change is one of the effective items in implementing clinical governance successfully (36). Also, Som reported accountability of government for change as an effective factor in implementing clinical governance successfully (37). Thus, successful implementation of clinical governance requires accountability of executers for change in order to institutionalize it. The results showed that the feedback, pilot implementation, and simulation before implementation of clinical governance were weak. Communication was also considered moderate. Freedman, in his study, reported communication, feedback, pilot implementation, and simulation before implementation of clinical governance, important and effective (36). Therefore, in order to have effective clinical governance, stakeholders should be informed of the results by providing feedback, and before implementation through simulation and pilot implementation, identify potential problems to avoid mistakes in the real environment and in terms of communication skills, involved people should be fully justified; as the successful implementation of clinical governance requires cooperation, work relations, and accurate and timely information exchange among partners.

5. Conclusions
In teaching hospitals, clinical governance should be accepted as a culture to all people participating, from senior managers to end-users who can understand its concept, mission and objectives, can digest it in the core of their work, and act based on its principles. This requires the preparation of all participants by providing appropriate training and improving communication. Therefore, it is suggested that before the implementation of clinical governance in these hospitals, detailed analysis needs to be done by creating systemic thinking to determine requirements. Also, appointed participants' coordination, cooperation, commitment, and willingness for setting it up. In addition, required training should be provided to all the participants depending on their educational needs to combine commitment and knowledge, so the setting up and running of the system can be facilitated. Conducting research to evaluate how to implement clinical governance in the hospitals is recommended periodically to timely identify and fix problems.

Conflict of Interest:
There is no conflict of interest to be declared.

Authors' contributions:
All authors contributed to this project and article equally. All authors read and approved the final manuscript.

References:
1) Tabibi S, Maleki M, Mojdehkar R. Performance evaluation of Ayatollah kashani hospital based on Baldrige Organizational Excellence Model. J Med Counc I.R. Iran. 2009; 27(1): 23-30.
2) Marandi SA. The integration of medical education and health care services in the Islamic Republic of Iran and its health impacts. Iranian Journal of Public Health. 2009; 38(1): 4-12.
3) Simbar M, Ahmadi M, Ahmadi G, Alavi-Majd HR. Quality assessment of family planning services in urban health centers of Shahid Beheshti Medical Science University, 2004. Int J Health Care Qual Assur Inc Leadersh Health Serv. 2006; 19(4-5): 430-42. PMID: 16961109.
4) Rad AM. A survey of total quality management in Iran. Int J Health Care Qual Assur Inc Leadersh Health Serv. 2005; 18(4-5): xii-xxxiv. doi: 10.1108/13660750510611189. PMID: 16167653.
5) Hooshmand E, Tourani S, Ravaghi H, Ebrahimipour H. Challenges in evaluating clinical governance systems in Iran: a qualitative study. Iran Red Crescent Med J. 2014; 16(4): e13421. doi: 10.5812/ircmj.13421. PMID: 24910799, PMCID: PMC4028772.
6) Marshall M, Sheaff R, Rogers A, Campbell S, Halliwell S, Pickard S, et al. A study of cultural changes in primary care organizations needed to implement clinical governance. Br J Gen Pract. 2002; 52(481): 641-5. PMID: 12171222, PMCID: PMC1314382.
7) Rigby D, Bilodeau B. Bain's Global management tools and trends survey. Journal of Strategy & Leadership. 2007; 35(5): 9-16. doi: 10.1108/10878570710819161.
8) Amar K, Mohd Zain Z. Barriers to implementing TQM in Indonesian manufacturing organizations. The TQM Magazine. 2002; 14(6): 367-72. doi: 10.1108/09544780210447474.
9) Beer M. Why total quality management programs do not persist: the role of management quality and implications for leading a TQM transformation. Journal of Decision Sciences. 2003; 34(4): 623-42. doi: 10.1111/j.1540-5414.2003.02640.x.
10) Bhat KS, Rajashekhar J. An empirical study of barriers to TQM implementation in Indian industries. The TQM Journal. 2009; 21(3): 261-72. doi: 10.1108/17542730910953031.
11) Jun M, Cai Sh, Peterson R. Obstacles to TQM implementation in Mexico's Maquiladora industry. Journal of Total Quality Management and Business Excellence. 2004; 15(1): 59-72. doi: 10.1080/1478336032000149108.
12) Ljungstrom M, Klefsjo B. Implementation obstacles for a work-development-oriented TQM strategy. Journal of Total Quality Management. 2002; 13(5): 621-34. doi: 10.1080/0954412022000002036.
13) Salegna G, Fazel F. Obstacles to implementing quality. Journal of Quality Progress. 2000; 33(7): 53-7.
14) Aghlmand S, Akbari F, Lameei A, Mohammad K, Small R, Arab M. Developing evidence-based maternity care in Iran: A quality improvement study. Journal of BMC Pregnancy Childbirth. 2008; 8(20): 1-8. doi: 10.1186/1471-2393-8-20.
15) Askarian M, Heidarpoor P, Assadian O. A total quality management approach to healthcare waste management in Namazi Hospital, Iran. Waste Manag. 2010; 30(11): 2321-6. doi: 10.1016/j.wasman.2010.06.020. PMID: 20655724.
16) Hamidi Y, Tabibi J. A Survey of TQM implementation in Hamadan healthcare organizations. Journal of Hamadan University of Medical Sciences. 2004; 11(1): 37-43.
17) Mohammadi SM, Mohammadi SF, Hedges JR, Zohrabi M, Ameli O. Introduction of a quality improvement programme in a children's hospital in Tehran: design, implementation, evaluation and lessons learned. Int J Qual Health Care. 2007; 19(4): 237-43. doi: 10.1093/intqhc/mzm021. PMID: 17573405.
18) Behshid M. Reasons for TQM failure. Proceedings of the 2nd Congress of Quality Improvement in Health Care Services, Tehran, Iran. 2003.
19) Dargahi H. Factors affecting TQM failure in healthcare organizations. Journal of Teb and tazkieh. 2003; 12(3): 49-61.
20) Nouri Gh. TQM implementation barriers in organizations. Proceedings of the 1st Congress of Quality Improvement in Health Care Services, Tehran, Iran. 2001.
21) Hamidi Y. Strategic leadership for effectiveness of quality managers in Medical Sciences Universities: what skills are necessary? Australian Journal of Basic and Applied Sciences. 2009; 3(3): 2563-9.

22) Aryankhesal A, Tabatabaee SS, Kalhor R, Kakeh mam E, Joyani Y, Moradi N. Association of organizational climate and hospital performance in establishment of clinical governance in Tehran University of Medical Sciences. The Journal of Qazvin University of Medical Sciences. 2015; 18(5(76)): 43-50.

23) Lim J, Burton T, Bowens A. What elements should be covered in a clinical governance development plan. UK: University of Leeds, Nuffield Institute for Health. 2000.

24) Hartley AM, Griffiths RK, Saunders KL. An evaluation of clinical governance in the public health departments of the West Midlands region. J Epidemiol Community Health. 2002; 56(8): 563-8. PMID: 12118044, PMCID: PMC1732230.

25) Hadizadeh F. Clinical governance: a method for its implementation in Iranian hospitals. Journal of Health Information Management. 2012; 9(3): 305-9.

26) National Health Services. Clinical governance policies and procedures. NHS report. 2008.

27) Mohaghegh B, Ravaghi H. Clinical governance: the Challenges and opportunities of supervisory system. Life Science Journal. 2013; 10(10s): 25-9.

28) Karsh BT. Beyond usability: designing effective technology implementation systems to promote patient safety. Qual Saf Health Care. 2004; 13(5): 388-94. doi: 10.1136/qhc.13.5.388. PMID: 15465944, PMCID: PMC1743880.

29) Singh R. Clinical governance in operation every body's business: a proposed framework. Journal of Clinical governance in operation. 2009; 14(3): 189-97. doi: 10.1108/14777270910976139.

30) Braithwaite J, Travaglia JF. An overview of clinical governance policies and initiatives. Aust Health Rev. 2008; 32(1): 10-22. PMID: 18241145.

31) Sedaghat M. Designing and implementing of clinical governance system in selected hospitals affiliated to Tehran University of Medical Sciences (TUMS). Abstract Book of First Regional Congress of Clinical Governance 2011. Gorgan, Iran.

32) Department of Health. Clinical Governance: Quality in the New NHS, Department of Health, London, 1999.

33) Atapour H. Challenges on establishing of clinical governance on health care systems, Imam Reza Hospital as a case study. The First International Congress on Clinical Governance and Patient Safety. 2012.

34) Hall LM. Nursing intellectual capital: a theoretical approach for analyzing nursing productivity. Nurs Econ. 2003; 21(1): 14-9. PMID: 12632713.

35) Sohrabi Z, Varmaghani M, Mokhtari M. The barriers and facilitators of clinical governance in Iran university hospitals. The Proceedings of First Seminar of Clinical Governance. 2010.

36) Freedman DB. Clinical governance--bridging management and clinical approaches to quality in the UK. Clin Chim Acta. 2002; 319(2): 133-41. doi: 10.1016/S0009-8981(02)00034-7. PMID: 11955490.

37) Som CV. Exploring the human resource implications of clinical governance. Health Policy. 2007; 80(2): 281-96. doi: 10.1016/j.healthpol.2006.03.01. PMID: 16678293.