

Implementing Clinical governance in Iranian hospitals: purpose, process and pitfallsBahram Mohaghegh¹, Hamid Ravaghi², Russell Mannion³, Peigham Heidarpoor⁴, Haniye Sadat Sajadi⁵

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Introduction: Clinical governance as an approach to improving the quality and safety of clinical care has been run in all Iranian hospitals since 2009. This study aimed to provide a comprehensive overview of the processes and challenges faced in implementing clinical governance (CG) in acute-care hospitals in Iran.

Methods: We conducted an in-depth, qualitative, multi-case study using semi-structured interviews with a range of key stakeholders and review of relevant documents. This study was conducted in 2011-2012 in six governmental hospitals affiliated with Tehran University of Medical Sciences. The data were analyzed using framework analysis.

Results: The interviewees, predominantly senior managers and nurses, expressed generally positive attitudes towards the benefits of CG. Four out of the six hospitals had a formal strategic plan to implement and execute CG. The emergent barriers to the implementation of CG included insufficient resources, the absence of clear supporting structures, a lack of supportive cultures, and inadequate support from senior management. The main facilitating factors were the reverse of the barriers noted above in addition to developing good relationships with key stakeholders, raising the awareness of CG among staff, and well-designed incentives.

Conclusions: There is a positive sense towards CG, but its successful implementation in Iran will require raising the awareness of CG among staff and key stakeholders and the successful collaboration of internal staff and external agencies.

Keywords: clinical governance, qualitative study, acute-care hospitals, Iran

1. Introduction*1.1. Background and study logic*

Clinical governance (CG) has a long history in many countries and health systems, but its current resurgence can be traced back to a series of leadership initiatives and supporting programs introduced in the UK NHS since the late 1990s. These initiatives were in response to several high-profile failures in professional practice and hospital governance, which garnered much political attention and fueled public debate about the need to strengthen regulation and tighten managerial arrangements for safeguarding the quality of health care and patients' safety (1). Although, there is a variety of competing definitions of clinical governance available in the academic and professional literature, perhaps the classic definition was provided by Scally and Donaldson, i.e., "Clinical governance is a system through which [health] organizations are accountable for continuously improving the quality

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of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish” (2). Several empirical studies have assessed the implementation of clinical governance in different health systems and health care settings (3-8), but given the recent introduction of clinical governance in the Iranian health system, to date, there have been only a few formal evaluations of the implementation of this policy in acute-care hospitals (9,10). Since 2009, the Iranian Ministry of Health and Medical Education (MOHME) has promoted CG as an approach for improving the quality and safety of clinical care in all hospitals. MOHME used the definition cited above as a guide to implementing the policy and developed a national model of CG that had seven components, i.e., clinical effectiveness, clinical audit, risk management, patient and public involvement, education and training, staff and staff management, and use of information (11). Several factors are considered to make up the foundation of this model, and they include systems awareness, leadership, ownership, teamwork, and communication. Iranian hospitals are expected to affect local implementation of the national CG program, adherence to which is evaluated by both local and national assessment teams.

1.2. Objectives

The aim of this study was to provide insight into the challenges and opportunities faced by Iranian hospitals in implementing the new clinical governance system. Specific objectives included generating evidence on the perceptions and attitudes of senior managers and clinical staff concerning the implementation of CG in hospital settings and the potential barriers and facilitating factors that support or impede its implementation.

2. Material and Methods

2.1. Research design

CG implementation is a complex and dynamic phenomenon to study, and we used a qualitative multi-case study to gain an in-depth understanding of the organizational process at work. The study was undertaken from October 2011 to March 2012 in six public, acute-care hospitals affiliated with the Tehran University of Medical Sciences.

2.2. Sampling and recruitment

With regard to considering a variety of common characteristics, including bed sizes, teaching status, and whether the hospital had a Board of Trustees, we used a purposeful method to select six out of 25 general hospitals that are affiliated with the Tehran University of Medical Sciences. In each hospital, the interviewees were selected so as to cover the diverse managerial and clinical responsibilities. This maximized the diversity of the samples and provided a realistic perspective concerning the implementation of CG in the hospitals. This selection process was continued until data saturation was achieved. The final 38 people who were interviewed were six senior managers, 11 medical specialists, 18 nurses, and three lab supervisors.

2.3. Data gathering and analysis

Semi-structured interviews and the review of official reports and documents were the two main tools used to collect data. All interviews were conducted by a member of the research team. The participants signed a consent form after being informed about the details of the study. Also, approval for the study was obtained from the Local Research Ethics Committee of the Tehran University of Medical Sciences prior to initiating the data-gathering process. A topic guide was developed to facilitate the interviews. It was piloted in a non-selected hospital with three participants, and amendments subsequently were made to the guide prior to its use in the case-study organizations. The interview guide covered questions including: 1) What do you understand by the term "clinical governance" in hospitals?; 2) Does your hospital have a strategic plan to develop clinical governance? What about its operational plan? If so, how was it prepared?; 3) What are the elements of clinical governance?; 4) Which of these are more important to the successful implementation of clinical governance?; 5) In your view, what are the potential facilitators that foster the implementation of clinical governance?; 6) What are the main barriers faced by hospitals when implementing clinical governance?. Most interviews took between 45 and 60 minutes to complete, and they were conducted in a quiet area at the workplaces of the interviewees. All interviews (except two) were audio-taped. The framework analysis method (12) was used to analyze the qualitative data. The transcripts of the interviews were presented to all interviewees for their approval. This could support the validation of data (13). The trustworthiness of data was assured by sending a brief report of the results to the participants and by incorporating their feedback in the findings of the study (14).

3. Results

The themes generated from the case studies are presented below in three broad categories: knowledge and attitudes about CG, planning activities, and the implementation process and associated issues.

3.1. Knowledge and attitudes about clinical governance

3.1.1. The concept of CG

Most of the participants did not describe CG in terms of its formal definition as set out by the MOHME. They tended to report that CG is a complex term that cannot be easily captured by a simple, all-embracing definition. The participants emphasized its various practical dimensions and goals rather than elaborating on its conceptual status. The main dimensions of CG, as articulated by respondents, centered on quality improvement processes, governance, and service efficiency. The way that senior managers tended to view CG was different to that of nurses or consultants; for example, senior managers focused mostly on the governance dimension, while nurses focused on the importance of quality improvement activities. The clinical consultants highlighted the importance of both governance and quality improvement initiatives. The interviewees noted such goals for CG that they could be considered at three different levels, including patients, staff, and the organization (Table 1). The levels of knowledge among the three professional groups were different with regard to the classic definition and components of clinical governance in the Seven Pillars model. The majority of respondents could not list the seven main elements of the model.

Table 1. Perceived goals of CG by participants

Perceived Goals	Level
<ul style="list-style-type: none"> Improvement of services <i>"{What is the goal of clinical governance?} The end of clinical governance is to promoting of delivered services to patients" [Sh24N].</i> patient satisfaction <i>"The trend and progress of healing and satisfaction of patients are the main goals of clinical governance" [F1N].</i> 	Patients
<ul style="list-style-type: none"> Promoting and making staff up to date (knowledge and skills) <i>"They want to standardize all {staff}, based on standards and being up to date ..." [Sh12Nm].</i> 	Staff
<ul style="list-style-type: none"> Promoting the system of hospital through finding the problems areas and their solutions <i>"{clinical governance} does find the root problems and regardless to who is in charge finds the causes and then act based on to move the system on a suitable direction, this is the general goal that I suppose for it { clinical governance}"[Z16M].</i> Defining standards of services <i>"The aim of clinical governance is to define the service standards to guide the service provision" [B2D].</i> 	Organization

3.1.2. Attitudes towards the implementation of CG

The interviewees were asked about their general attitudes towards the implementation of CG in their organization. Those with optimistic views outnumbered those with negative views. However, staff in non-teaching hospitals tended, on the whole, to be more negative. The most and the least optimistic groups were senior managers and consultants, respectively. Improvement in monitoring processes and pathways to deliver clinical services, and also beneficial behavioral change among clinical staff, were cited as positive outcomes of CG in hospitals. Some participants reported that, if CG were implemented properly, it would be more likely to achieve its intended benefits of reducing patient complaints, lowering clinical errors, and improving the quality of services: "Nowadays, clinical governance has had much impact, not restricted to our hospital, and it has created a behavior change in staff" [SH11M]. "When the hospitals continue to implement clinical governance, the rate of patients' complaints is expected to go down" [F5D]. A minority of participants expressed negative attitudes towards the implementation of CG in their organizations. Most complaints focused on the bureaucratic load generated by CG and its lack of a connection with this and improving clinical practice and patients' outcomes. In particular, the nurses thought that CG reduced the amount of time they had to complete their daily activities and imposed an additional burden on an already over-worked staff, resulting in less time spent on patient care. In addition, some believed that CG was a temporary intervention for political ends rather than a well thought through and sustainable approach to improving service quality and patients' safety: "The feeling of all is that clinical governance is creating and imposing lots of tasks on us, such as filling out paper forms and other work" [Sh12Nm]. Two senior managers believed that CG was not a new initiative for hospitals; they emphasized that several similar strategies relating to clinical audits, patients' complaints, and patients' safety pre-dated the latest CG reforms. The interviewees reported that the most difficult components of CG to implement are staff management, risk management, and patient and public involvement.

Regarding the effectiveness of CG elements to improve the quality of clinical services, the respondents believed that all seven elements are important because they are interrelated and complementary to each other. However, most emphasized three important elements, patient and public involvement, staff management, and risk management.

3.2. Planning activities

The interviewees reported that planning is an important part for appropriate implementation of CG. Based on a review of internal documents in the case studies, four out of the six hospitals had a formal strategic plan to implement and execute CG. These hospitals all had a contract with private consulting companies to help them develop their strategic plan, and the involvement of hospital staff in preparing the strategic plan was poor: "At least, I have not been informed {about strategic plan of hospital}, not any information, and not any participation" [SH19D]. Several respondents believed that their strategic plan missed key aspects, such as contextual and environmental assessment as well as practical goals and strategies. Inadequate commitment of senior managers to follow and implement the objectives contained in the strategic plans was a key issue that was noted by some interviewees: "It seems that our management or our boss just has written the strategies on paper, ..., he is not committed to implement it" [F3Nm].

3.3. Implementation process and issues

3.3.1. The establishment of CG

The stages of implementation of CG across the hospitals varied. For example, the CG committees had been formed in only half of the hospital case studies; and two components, i.e., "clinical effectiveness" and "use of information," had not been developed in some hospitals. Respondents reported that CG should be implemented incrementally, step-by-step, and accompanied by a pilot study that should be evaluated before extending the process across the whole organization.

3.3.2. Barriers and facilitators influencing the implementation of CG

Interviewees focused on several factors that served to attenuate or facilitate the successful adoption and spread of CG in their organization. Table 2 details the key perceived barriers and the facilitating factors. These are discussed below:

Table 2. Perceived facilitators and barriers to the implementation of clinical governance

Perceived facilitators	Perceived Barriers
<ul style="list-style-type: none"> • Providing enough resources 	<ul style="list-style-type: none"> • Inadequate resources
<ul style="list-style-type: none"> • Establishing formal structures and methods 	<ul style="list-style-type: none"> • Lack of formal structures and methods
<ul style="list-style-type: none"> • Supportive management 	<ul style="list-style-type: none"> • Lack of supportive management
<ul style="list-style-type: none"> • Supportive organizational culture 	<ul style="list-style-type: none"> • Lack of supportive organizational culture
<ul style="list-style-type: none"> • Interaction with stakeholders 	
<ul style="list-style-type: none"> • Raising awareness • Incentives 	

3.3.2.1. Facilitating factors

Respondents placed special emphasis on the availability of resources as a facilitating factor in developing CG in hospitals. Some participants believed that to facilitate the implementation of quality improvement programs, an established unit with an appointed CG lead was needed to champion and coordinate relevant activities within the hospital. In addition, forming work teams, consisting of representatives from all units in the hospital, to execute all seven components of CG simultaneously across the hospital was thought to be a key requirement of successful CG implementation. Some interviewees proposed assigning one or two staff in each ward or department to serve the role of a "link chain" between departments and the central CG unit to help facilitate and coordinate the quality improvement activities. In the view of many participants, senior management plays a major role in facilitating the development of CG. They described a supportive management culture, which fostered employee participation in organizational decisions and which rewarded and valued the good performance of employees with regard to their CG activities. Moreover, it was emphasized that senior managers should have more understanding and belief in the CG program as a prerequisite to assuring their greater involvement in both the planning and implementation processes. Some respondents emphasized that CG should be embedded in the organization's culture, which may help facilitate CG implementation: "At first, we should culturalize {the clinical governance}" [S8M]. They explicitly described the key characteristics of a desirable supportive culture, including the need for collaborative work among practices and units, team work, participation of staff in decision making, valuing staff's views, creation

of a climate of trust among staff, and an increase in the "cost tolerance" of the organization with regard to the ongoing expense of implementing CG. The other facilitating factor cited by interviewees was the need for constructive ongoing engagement with relevant external stakeholders. It was felt by many that providing appropriate information for all interested organizations (e.g., welfare agencies, local medical universities, MOHME, the media, and NGOs (e.g., the Nursing Organization and the Medical Council), as well as raising awareness of the local population, patients, and carers, may result in more support and active involvement of external stakeholders in the implementation of CG: "If the NGOs and other governmental organizations feel that this {clinical governance} could be a part of their work and benefit them, they would be more involved [S9D]. Raising the awareness of staff about CG was noted by some interviewees as a key facilitating factor, and it was emphasized that continuing education and training was needed for staff at all levels of the hierarchy. Many respondents highlighted the role of incentives (both monetary and non-monetary) and well-designed reward systems at both the individual and organizational level as key facilitators of developing effective clinical governance. These included creating a sense of "being seen" and heard among staff, establishing a formal incentive mechanism, such as performance-based payment and explicit rewards and punishments, and providing constructive feedback on performance. The term of "being seen" was mentioned mostly by nurses and refers to formal policies for listening to their views by hospital managers. Some participants believed that if medical universities linked the budget allocated to hospitals and the annual hospital assessment system to the implementation of CG, then hospitals would pay more attention to the implementation of CG. Some participants stated that regular internal and external monitoring and evaluation have a crucial role in how the program is implemented. In particular, the role of the Medical Universities was stressed by a senior manager and a supervisory nurse. It was commonly accepted that sending regular and constructive feedback to hospitals by external organizations (i.e., MOHME and local Medical Universities) might help hospitals to recognize and remedy local problems and challenges. A key feature associated with an effective monitoring and evaluation system was the provision of constructive feedback at individual and organization levels. Some interviewees highlighted the role of constructive feedback by external agencies concerning the performance of hospitals with regard to implementing CG. At the individual level, the importance of providing feedback on staff performance also was noted.

3.3.2.2. Barriers

The perceived barriers to the successful implementation of CG included factors such as insufficient resources, a lack of formal structures, the lack of a supportive culture (at organization and community levels), and inadequate support of top management. Although, cultural and structural obstacles were mentioned mainly by clinical consultants and managers, nurses frequently cited the resource constraints and managerial barriers. Resource constraints were the barrier most frequently noted by respondents. This included shortage of human resources, insufficient funding, a lack of equipment, and inadequate physical space. Almost all nurses and several consultants and managers cited staff constraints as an important barrier to the effective implementation of CG in hospitals. In general, most staff thought that their hospital was understaffed. A number of nurses pointed out that this can result in low morale among the staff and burnout. In some hospitals, several newly-recruited nurses had left the organization due to the stress associated with their high workloads. Thus, many nurses reported that the implementation of CG and quality improvement programs could not be easily achieved in such an environment: "I think the most important {barriers} are shortage of human resources and financial support" [Sh12Nm]. Insufficient funding was cited as a barrier mostly by consultants and rarely by senior managers. Half of the nurses stated that shortages of equipment and facilities were factors that can hinder and slow down the implementation process. Some respondents suggested that the generally low level of knowledge among staff about CG was a severe impediment to the implementation of CG and quality improvement initiatives: "One of {the barriers} is the financial issues; the others are equipment and physical spaces" [S10N]. "Among barriers which there are, one of them is the low knowledge of staff" [Z21Nm]. The other perceived barriers were poor involvement and support of senior managers at hospital and university levels. Some interviewees believed that implementing clinical governance was not their first priority and they were not adequately involved in the program. Another barrier identified was the absence of structures and clear methods to support CG within the hospitals. The respondents stated a number of shortcomings, including inadequacy of planning practices, ambiguity over precise methods and guidelines, a lack of a formal structure, and regular teamwork to guide CG implementation. Some interviewees from the teaching hospitals stressed that there were no clear incentives, rules, and guidance to engage academic consultants in the CG process. The cultural barriers to CG highlighted by staff centered on a lack of accountability for quality of services, the lack of effective teamwork, a perceived resistance of staff to the program, especially among consultants who valued their clinical autonomy and resisted attempts by managers to monitor the quality of their work.

4. Discussion

Iran is following in the path of other countries, such as the UK, Australia, and New Zealand in attempting to implement an ambitious program of CG reform in its hospitals. As in other countries, elements of CG already exist in the hospitals, but the new policy has attempted to build and add coherence to a range of fragmented quality improvement activities. This article reports on the first assessment of the barriers and opportunities afforded by the new CG reforms. In our study, we found a wide range of views and perspectives relating to the introduction of CG in Iran. We found that many staff had insufficient knowledge and lacked a “clear understanding” of the principles and practice of CG, and this was thought to be a major obstacle in achieving the desired improvement in the quality of service and patients’ safety in hospitals, both of which also were mentioned in other studies (15, 16). On the whole, we found a generally positive attitude among staff towards CG; this is consistent with the findings from similar studies elsewhere (5, 17-19). In comparing the three main groups of staff, we found that the senior managers were the most optimistic about the potential beneficial effects of CG, but the social acceptability bias should be taken into account in this regard. The hospitals should develop plans to ensure proper implementation of CG. There also was a strongly-held view that staff at all levels should be consulted, involved, and engaged in the planning and implementation of CG programs. Staff members were of the view that the pace of implementing CG should be slower and that new policies should not be implemented before they were piloted nationally. This finding was similar to findings in previous research, which found that CG should be implemented in a step wise-progression using a “softly-softly” approach (5). Staff reported that the most important component of CG-related improvements in the quality of care was in relation to patients’ and the public’s involvement, which was not a finding reported in previous research (6). CG is in its infancy in Iran, and there appears to be an urgent need to raise awareness among patients and the public about the role they can play in the process. From the viewpoint of staff, the facilitating factors to the implementation of CG were almost the same prerequisites that had not been provided; so, they often repeated them again in the form of barriers. The identified obstacles included a lack of adequate senior management support as well as resource, structural, and cultural barriers, which reinforce the findings of a 2002 study by Campbell (19). Not surprisingly, the scarcity of resources was the most frequently-noted barrier to impede the progress of the implementation of CG, which was congruent with the findings of some other studies (4, 6, 9, 20). More committed involvement among clinicians was emphasized as a key issue if CG is to be implemented effectively. The low level of interest and involvement of medical consultants in quality improvement programs is a common barrier in the implementation of such initiatives. This is consistent with the result of other studies (21-23). The results of this study suggested that a participatory model of CG, which embraces and draws on the interests, knowledge, and skills of all interested stakeholders, is required for the successful implementation of the policy. The active involvement of senior management in supporting this approach would appear to be crucial in this regard (24, 25).

5. Conclusions

This study showed that most of the personnel had a superficial understanding of CG. There was a positive viewpoint towards CG, but many obstacles were perceived on the path of CG implementation among Iranian hospitals. Therefore, it would be useful for the MOHME to develop a range of strategies for communicating information on clinical governance to hospitals and the communities at the national level as well as the local level through interaction with key stakeholders, including the media, professional bodies, and NGOs. Further research is required to track the progress of the CG policy as it unfolds over time. In particular, our study highlights that it may be useful to undertake more sustained study to determine how hospitals can implement CG in a collaborative manner with key partners and, in particular, how senior clinicians can best be motivated to engage with the CG reforms and help to lead the next stage of quality improvement in Iranian hospitals.

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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) Davies H, Mannion R. Clinical governance: striking a balance between checking and trusting, in Smith, P. (ed) *Reforming Health Care Markets: An economic perspective*, Buckingham: Open University Press, 2000; 247-67.
- 2) Scally G, Donaldson LJ. Clinical governance and the drive for quality improvement in the new NHS in England. *BMJ*. 1998; 317: 61-5. doi: 10.1136/bmj.317.7150.61.
- 3) Latham L, Freeman T, Walshe K, Spurgeon P, Wallace L. Clinical governance in the West Midlands and South West regions: early progress in NHS trusts. *Clinician in Management*. 2000; 9: 83-91.
- 4) Wallace L, Freeman T, Latham L, Walshe K, Spurgeon P. Organisational strategies for changing clinical practice: how trusts are meeting the challenges of clinical governance. *Qual Health Care*. 2001; 10: 76-82. PMID: 11389315, PMCID: PMC1757989.
- 5) Sweeney GM, Sweeney KG, Michael J, Greco MJ, Stead JW. Softly, softly, the way forward? A qualitative study of the first year of implementing clinical governance in primary care.. *Prim Health Care Res Dev*. 2002; 3(1): 53-64.
- 6) Walshe K, Cortvriend P, Mahon A. The implementation of clinical governance: a survey of NHS trusts in England. *Manchester Centre for Healthcare Management*. 2003.
- 7) Freeman T, Walshe K. Achieving progress through clinical governance? A national study of health care managers' perceptions in the NHS in England. *Qual Saf Health Care*. 2004; 13(5): 335-43. PMID: 15465936, PMCID: PMC1743892
- 8) Gauld R, Horsburgh S, Brown J. The clinical governance development index: results from a New Zealand study. *BMJ Qual Saf*. 2011; 20(11): 947-52. doi: 10.1136/bmjqs.2011.051482, PMID: 21653936
- 9) Dehnavieh R, Ebrahimipour H, JafariZadeh M, Dianat M, NooriHekmat S, Mehrolhassani MH. Clinical Governance: The Challenges of Implementation in Iran., *Int j hosp res*, 2013; 2(1): 1-10.
- 10) Ebadi Fardazar F, Safari H, Habibi F, Akbari Haghghi F, Rezapour A. Hospitals' readiness to implement clinical governance. *Int J Health Policy Manag*. 2015; 4(2): 69-74. doi: 10.15171/ijhpm.2014.111, PMID: 25674566, PMCID: PMC4322629.
- 11) Nicholls S, Cullen R, O'Neill S, Halligan A. Clinical governance: its origins and its foundations.. *Clin Perform Qual Health Care*. 2000; 3(3): 172 -78. PMID: 11142803.
- 12) Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In: Bryman A and Burgess RG (eds). *Analysing Qualitative Data*. London: Routledge.1994.
- 13) Belk RW, Sherry JF, Wallendorf M. A naturalistic inquiry into buyer and seller behavior at a swap meet. *J Consum Res*. 1988; 14(4):449-70.
- 14) Mays N, Pope C. Qualitative research in health care: Assessing quality in qualitative research, *BMJ*. 2000; 320: 50-2. PMID: 10617534, PMCID: PMC1117321.
- 15) Som CV. Exploring the human resource implications of clinical governance. *Health Policy*. 2007; 80(2): 281-96. PMID: 16678293.
- 16) Ravaghi H, Zarnaq RK, Adel A, Badpa M, Adel M, Abolhassani NA. A Survey on Clinical Governance Awareness Among Clinical Staff: A Cross-Sectional Study. *Glob J Health Sci*. 2014; 6(6): 37-42. doi: 10.5539/gjhs.v6n6p37, PMID: 25363112.
- 17) Murray J, Fell-Rayner H, Fine H, Karia N, Sweetingham R. What do NHS staff think and know about clinical governance?. *Clin Govern Int J*. 2004; 9(3): 172-80.
- 18) Meal A, Wynn A, Pringle M, Cater R, Hippisley-Cox J. Forging links: evolving attitudes of clinical governance leads in general practice. *Qual Primary Care*. 2004; 12: 59-64.
- 19) Campbell SM, Sheaff R, Sibbald B, Marshall MN, Pickard S, Gask L, et al. Implementing clinical governance in English primary care groups/trusts: reconciling quality-improvement and quality assurance. *Qual Saf Health Care*. 2002; 11: 9-14. PMID: 12078380, PMCID: PMC1743564.
- 20) Ravaghi H, Rafiei S, Heidarpour P, Mohseni M. Facilitators and Barriers to Implementing Clinical Governance: A Qualitative Study among Senior Managers in Iran. *Iran J Publ Health*. 2014; 43(9): 1266-74. PMID: 26175981, PMCID: PMC4500429.
- 21) Audet AM, Doty MM, Shamasdin J, Schoenbaum SC. Measure, learn, and improve: Physicians' involvement in quality improvement. *Health Aff*. 2005; 24(3): 843-53. PMID: 15886180.
- 22) Mohammadi SM, Mohammadi SF, Hedges JR, Zohrabi M, Ameli O. Introduction of a quality improvement program in a children's hospital in Tehran: design, implementation, evaluation and lessons learned. *Int J Qual Health Care*. 2007; 19(4): 237-43. PMID: 17573405.

- 23) Degeling P, Maxwell S, Iedema R, Hunter D. Making clinical governance work. *BMJ*. 2004; 329: 679-81. PMID: 15374921, PMCID: PMC517655.
- 24) Braithwaite J, Travaglia J. An overview of clinical governance policies, practices and initiatives. *Aust Health Rev*. 2008; 32(1): 10-22. PMID: 18241145.
- 25) 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.