

ORIGINAL ARTICLE

Challenges and Opportunities Faced by Teaching Hospitals in the Perception of Stakeholders and Hospital System Managers

Safarani Samaneh, Ravaghi Hamid, Raeissi Pouran, Maleki Mohammadreza

Department of Health Services Management, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, IRAN
Email: Ravaghih@gmail.com

Abstract

Today, hospitals are the most important medical institutions providing health care services, and a large share of health care resources is allocated to especially teaching hospitals. Given the fact that these hospitals have three main missions; namely, therapy, education, and research that paying attention to their challenges and opportunities can be vital for providing high quality services for patients. The aim of present study is to survey the viewpoints of stakeholders towards teaching hospitals. The qualitative study was done in 2017. For data gathering, we used interviews with 41 key informants, senior and middle managers in teaching hospitals and stakeholders in health care fields. Framework analysis approach was applied to analyse the data by MAXQDA software. Four themes and 13 subthemes were explored; three of them were about education, treatment and research challenges and one for teaching hospital opportunities. Education challenges includes: decline of educational mission attendance, lack of educational facilities, and non-compliance with educational standards. Treatment challenges like quality of health services provision, lack of resources and facilities and research challenges such as research structure, research quality in the hospitals, and low research facilities. Teaching hospital opportunities including potential of student presence, research opportunity, medical specialist training, meriting from up-to-date medical faculty and the benefits of them for patients. The results showed that teaching hospitals are more complex than other organisation as they have a big mission. They have a huge number of opportunities. On the other hand, they faced some challenges in the field of therapeutic, education and research because they perform all of these duties together, which by identifying them, they can be developed in these three goals and ultimately the efficiency and quality of teaching hospitals can be promoted in comparison with other hospitals.

Keywords: Challenges and opportunities, Teaching hospitals, Stakeholders, Health system managers, Perceptions

Introduction

Providing health services to all people is always at the center of policies and programs of policymakers and policy of each country's health system (1). Meanwhile, hospitals are one of the most complex and important institutions in providing health services (2). They have a special sensitivity to the efficiency of the health systems. The regulations on the establishment and administration of hospitals define hospital as a medical institution that improves outpatient and inpatient cares and ensures comfort and safety of patients and its staff through resorting to diagnostic, therapeutic, health, educational, and research facilities (3). They are categorized in different aspects, one of which is based on their mission. According to their mission, hospitals are divided into two categories of teaching and non-teaching ones. The missions of a teaching hospital are health, educational and research services provision (4).

Today, large share of healthcare resources are allocated to teaching hospitals (5). Therefore; the efficacy for managing such hospitals is a major challenge that health and hospital decision-makers are faced. In this regard, the review of existing studies confirms this fact that hospitals have challenges in the provision of health services, education, research, and other dimensions. Teaching hospitals in all countries suffer from problems in different areas: for example, a number of studies revealed that the performance of some of the teaching hospitals is undesirable concerning responsiveness to medical errors as well as quality and safety of health care due to presence of students from different disciplines and sometimes due to unsatisfactory performance of assistants and residents in the provision of health care to patients (6, 7). Some of these hospitals are also in poor condition regarding their education and research (8). Teaching hospitals face major challenges such as unbalanced budget allocation to education, treatment and research area. This unbalanced combination may prevent teaching hospitals achieving all their organizational missions (9). Other challenges of teaching hospitals are as follows: low efficiency in providing health services, irregular presence of some physicians and lack of medical and educational facilities (10, 11, and 12). Some teaching hospitals have poor quality in the field of education and do not operate properly with respect to treatment either. Also, there were some studies which partially mentioned to teaching hospitals challenges but there were no a holistic and deep study that provide all teaching challenges and opportunities of teaching hospitals in one study. The present study sought to identify these factors of teaching hospitals by focusing on views of the stakeholders, practitioners, and principal executives in teaching hospitals and other related organizations.

Materials and Methods

A qualitative research was conducted to investigate a comprehensive understanding about senior and middle managers' viewpoint toward Challenges and opportunities of teaching hospitals in Iran. For this purpose, we used face to face interviews with a purposeful sample of 41 key informants including senior and middle managers in 5 Tehran teaching hospitals, faculty members of the Medical Sciences Universities, and Ministry of Health headquarters. We selected both general and specialized hospitals and also by their person's willingness to participate. Samples were identified by their fields of study and their position which were related to the health care management. They selected based on their willingness to participate and considering their job in teaching hospitals. Those who were most involved concerning the aim of the study with maximum variability were chosen. The sampling continued until reaching data saturation. They include managers and Ministry of Health headquarters, faculty members of medicine, nursing and management departments, heads and senior and middle managers of hospitals, educational, therapeutic, research deputies/ assistants, supervisors of wards, residents, and key experts in hospitals. The participants were invited for interview through making phone calls or sending e-mails. The time and place of interviewing were selected based on an agreement between the interviewer and interviewee. In the first step, an interview topic guide was developed on the basis of findings of literature review and expert opinions (Table 1). Most interviews took about-30 minutes and notes were taken from all interviews. Permission to record the interviews was obtained in all cases. To increase the validity of the interviews, the coded texts were reviewed by two persons. Framework analysis approach was applied to analyze the data by means of MAXQDA software version 10.

Table 1: Summary of interview questions in topic guide

<i>Sample of Questions Asked through the Interview</i>
What are Teaching Hospital duties and what are their goals?
Who are the responsible for Curing, Education and Researching in a teaching hospital?
In your idea, what are the challenges of Education in Teaching Hospital?
In your idea, what are the challenges of providing Curing services in Teaching Hospital?
In your idea, what are the challenges of Researching in Teaching Hospital?
In your idea, what are the opportunities of Teaching Hospital?

Results

We interviewed with 41 participants. The demographic characteristic of them are summarized. (Table 2)

Table 2: Summary of demographic characteristic of participants

Age	Gender	Position	Education level	Job experience
26.8% (30-40)	34.15% Male	39.3% (Top Manager or Dean)	29.27% (Under Ph.D)	41.5% (15 and Under 15 years)
73.2% (40)+	65.58% Female	60.97% (Middle managers or Employees)	70.73% (Ph.D and upper)	58.5% (15+)

Four themes and 13 subthemes were explored; three of themes were about teaching hospital, treatment and research challenges. One theme was about teaching hospital opportunities (Table 3)

Table 3: Challenges and opportunities of teaching hospitals

Domain	Themes	Sub themes
Challenges of teaching hospitals	-Educational challenges	-Decline of educational mission attendance -Lack of educational facilities -Non-compliance with educational standards
	-Therapeutic Challenges	-Quality of health services provision -Lack of resources and facilities
	-Research challenges	-Research structure -Research quality in the hospitals -Low research facilities
Teaching hospital opportunities	- Opportunities	-Potential of student presence -Research opportunity -Medical specialist training -Meriting from up-to-date medical faculty -The benefits of teaching hospitals for patients

Teaching hospital missions, duties and responsibilities

According to most interviewees, the main mission of hospitals is primarily to provide healthcare services. Some believed that the education mission is the main goal of hospitals around the world including educating medical and paramedical students, and then training supportive and administrative personnel. A number of participants also considered research as one of the hospital's missions and believed that conducting research can help to overcome educational and therapeutic problems. Others also considered the combination of education and treatment as the hospitals' missions and held that providing safe health services with high quality. In terms of duties, three sub-themes were identified which mentioned to the missions of teaching hospitals, including education, treatment, and research in the teaching/university hospitals.

Challenges of teaching hospitals

The simultaneous implementation of all three missions of teaching hospitals has encountered these organizations with many problems such as educational, therapeutic, and research challenges as follows:

Educational challenges

Most of the challenges expressed by experts were related to educational challenges of hospitals. Educational challenges are generally divided into three subcategories: decline of educational mission attendance, lack of educational facilities, and lack of educational standards. More details are presented in follows regarding these challenges:

1) Decline of educational mission attendance

Most stakeholders acknowledged that the importance of teaching has diminished in some hospitals and less attention is given to medical education. According to a number of participants, the mission of the teaching hospital has been forgotten and there is not enough supervision in this area, resulting in decreased quality of education and training. That is, teaching hospitals priorities theoretical needs over education. As an example, a university deputy said: *“The number of patients referred to teaching hospitals has significantly increased diminishing the importance of education and professors and students cannot discuss profoundly on a training case. P17-32”*

One of the reasons for this phenomenon, according to a faculty member, is self-regulation of hospitals and involvement of the hospital in making money and profits. Subsequently, physicians have little incentive to train, resulting in students’ displeases. A health economics professor pointed out that education services are not valued; that is, the financial and spiritual benefits of teaching have not been determined. On the other hand, the type of payment is in form of fee-for-service highlighting this problem. In this regard, a number of professors pointed out the high number of deprived people referring to these hospitals and teaching hospital are responsible to them. Some experts held that the integration of education and treatment has reduced the quality of therapy, although the number of professors has now increased and some of these problems have been removed. Other interviewees believed that the increased number of non-teaching patients such as patients with emergency or chronic disease is another factor contributing to reduction of education qualities in teaching hospitals, especially in the evening and night shifts, when professors are rarely available. The continuous rotation of residents also creates more problems, and the process of familiarizing students with teaching roles needs time. Even training other groups such as nurses is not well done due to lack of trainers. The conflict between the benefits of treatment and education is another issue that has been addressed by some professors. Therefore, prioritizing treatment hurts education. In fact, treatment and education are two distinct and important missions and focusing on one of them encounters the other with problem.

2) Lack of educational facilities

As education itself requires infrastructure such as financial, human, physical, and equipment resources, the other issue weakens the education is the lack of allocating adequate educational budget to hospitals according to viewpoints of hospital managers and educational deputies. This fact makes the hospital unable to provide facilities such as equipment needed for medical students. The shortage of educational environment is another problem that educational deputies raised. The other problem being addressed is lack of sufficient hospital beds. The lack of suitable accommodation facilities for university students is the other ones. Pavilion constraints also create a problem. In addition, the educational deputy is not solely responsible for training, but must also provide appropriate educational facilities, including libraries, classrooms, educational services staff, conference halls, and internet. In this regard, a senior resident pointed out that there is no assigned responsible for the guidance of residents; that is, the number of educational experts in relation to students is very low;

moreover, the authority of the hospital's educational deputies is inadequate in absorbing all the resources. A hospital educational deputy said: "*Educational experts should monitor the performance of the faculty educational activities and provide feedback to the educational staff, as if they do not provide feedback, the educational staff cannot identify their drawbacks.* P33-29"

3) *Non-compliance with educational standards*

Educational standards include the number of professors and trainers, setting the educational programs and regulations, the existence of curriculum, and specific standards. From the experts' point of view, the standard number of professors to students is determined by Ministry of health but it is not always observed. When the number of admitted students reduces, this equilibrium falls apart. These standards are also considered under the accreditation standards and their implementations can be a great solution. Failure to complete curricula is another challenge in which the necessary educational materials are not taught; in addition, the curricula of different educational groups are different. A number of professors addressed the lack of necessary educational guidelines and held that many of the students' logbooks are not covered. Furthermore, if a change occurs in hospital programs such as a day off or repair of a ward, training programs will also be disrupted, and this disparity between therapeutic and educational activities will increase the rate of complaints. Failure to comply with educational regulations was also expressed by a number of experts, so that the education of students is not going on during their studies, there is no specific hours and programs, and the professors are not sufficiently committed to teaching.

Therapeutic Challenges

Therapeutic challenges are the second most frequent challenges given the importance of treatment, provision of health services, and saving the lives of patients. Many people believe that the presence of residents in teaching hospitals has reduced the quality of treatment; therefore, consideration of this issue by health care providers is essential. However, due to commonality of the missions, many of the therapeutic and educational challenges are shared. Here, therapeutic challenges are divided into two subcategories; namely, quality of health services provision and lack of resources and facilities.

1) *Quality of health services provision*

In teaching hospitals, there are problems concerning the quality of health care and treatment of patients due to increasing number of patients and the combination of education and research missions with treatment one. Issues such as compliance with the charter of care recipients, increasing medical errors, and long period treatment are among factors affecting the quality of health service provided to patients. However, in recent years, some of these issues are removed due to presence of therapeutic accreditation standards. The findings showed that one of the problems pertains to patient's rights. With respect to matrons' view, the presence of a large number of medical students at the bedside, while being an opportunity for students, is unpleasant for patients. Hospital managers also believed that treatment undertaken by several health professional (e.g. medical students) is distressing for patients; although, all the treatment procedures are done under the supervision of a professor, the main therapist is still unclear. In addition, patients do not have the right to choose their own therapist and they are not even justified about the work routine of a teaching hospital increasing patient's dissatisfaction. Another major therapeutic challenge, according to almost all interviewees, is the belief that the rate of medical mistakes increases due to presence of medical students, endangering the patients' lives. In particular, hospital managers and treatment deputies agreed that the quality of health services is reduced and despite providing medical education and training, medical errors occur due to residents' rotation. Not only medical students' inexperience and lack of skill but also the presence of paramedical or nursing students bring about some problems. The other problems that nearly half of the interviewees mentioned were the long period of the treatment process in teaching hospitals due to existence of education and therapeutic hierarchy. Since treatment procedure begins with the visit of the first year resident in the teaching hospitals; and when the patient has a rare disease, all residents

should visit that patient, the treatment process is prolonged at these hospitals that can damage the health of patients. For example, operating room constellations occur due to long waitlist of eligible surgical candidates. Even extra tests are taken from patients that increase financial burden on the patients.

2) *Lack of resources and facilities*

Appropriate resources include financial, equipment, human, and specialists resources. One problem created in the teaching hospitals because of large number of patients is the lack of sufficient number of doctors, nurses, and paramedical staffs. Even the number of residents is not enough in some hospitals. The head of a single-specialty hospital complained about the limited number specialty physicians. Many health professional prefer private hospitals. On the other hand, as technology is in progress and these advances emphasize on rapid treatment, the teaching hospital intended to educate medical students encounter challenges.

Research challenges

One of the missions of the teaching hospitals is research that its importance is diminishing in comparison to two other missions. Hence, this mission also faces challenges. In general, research challenges are divided into three sub-themes, including research structure, research quality in the hospitals, and research facilities.

1) *Research structure*

Some scholars pointed out that the research department is not even defined in hospitals; that is, there is no independent research department for medical students. In some hospitals, there is no research organizational structure. Currently, most of the research is done at research centers where their substantive agreement has not yet been approved; therefore, the researchers are not seriously trained. One of the reasons pertains to the hospital managers' view considering the hospital as a medical center or ultimately as an educational institution. Others held that there is no defined protocol and exact structure for research, its sketching has not been determined yet, and even its plans and achievements have not been organized. Although many of these research centers are geographically located within the hospital, they have independent management.

2) *Research quality in the hospitals*

Most scholars believed that students had progressed somewhat in the clinical and educational dimensions but research activities are limited among medical students and professors are not compelled to conduct research. Even for other hospital staff, such as nurses, no research fields are determined. On the other hand, a large number of patients referred to teaching hospitals leave no spare time for professors and medical students to do research. A faculty member said: *"We did not force our students to do research. We have progressed concerning clinical and educational dimensions. We were not active in research domain; that is, there is a cultural problem that we do not value research. We did not allocate budget for conducting research. We did not even consider research in hospitals planning such as strategic planning. In general, research activities are not organized. P34, 237-9"*

On the other hand, ongoing research has no effect on the improvement of diseases, since the goal of conducting research in the hospital is to contribute to the treatment of patients and increase the level of students' knowledge. However, this issue has not been fully achieved in hospitals. Some experts believed that lack of valuing research services is also one of the reasons for the decline of its quality. That is, low awareness toward the importance of research and considering it as a consumer and without any benefits for patients. Some also pointed out that fee-for-service system has attracted much of physicians' attention toward treatment. Although they have to do research for their promotion, these requirements are not so much in depth and in harmony with other missions. A number of faculty

members considered the lack of observing property rights in some research by hospitals as one of the research problems.

3) *Shortage of research*

Although research can be of great help to the hospital to reach other goals better, but some reasons prevent to have sufficient research. One of the reasons, according to some of the stakeholders, is that research projects are time consuming. Some acknowledge that research resources that are abundant in hospitals are not accessible or there are deficiencies in patients' medical record that cannot be relied upon. Even research deputies referred to lack of research experts. In addition, they believed that insufficient financial support from research, is one reason for research incentives decline. They also referred to inability to supply research equipment and lack of immediate financial gains from research projects.

Teaching hospital opportunities

Along with the challenges posed to teaching hospitals, they have a number of advantageous and opportunities that private hospitals or non-teaching one lack such merits. In terms of quantity, the number of aforementioned opportunities is about one-third of the challenges, but they are of great importance to the future of the health system that cannot be ignored. These opportunities are divided into five subcategories: potential for student presence, research opportunity, medical specialist training, up to date medical faculty, and benefits of teaching hospitals for patients.

1) *Potential of student presence*

According to hospital managers, the presence of residents and medical students in various fields brings about many unique advantageous for teaching hospitals. For instance, they are available and take care of patients on holidays and evening and night shifts. Nevertheless, these students may lead to device degradation on one hand and they need class and other educational facilities. Generally, costs are reduced due to presence of residents which receive much less salaries in comparison to specialist. According to experienced educational deputies, teaching hospitals are superior to private ones. A head of a college said: "*Teaching hospitals are alive and active because of the presence of students, and this is understood by everyone who enters a teaching hospital and an academic environment. If educational processes are properly conducted, a teaching hospital has the potential to provide better health services in comparison with non-teaching hospitals.* P36-81"

2) *Research opportunity*

The professors believed that there is a good research environment and a rich source of medical data in teaching hospitals that can be used even internationally. On the other hand, the research conducted in these hospitals is problem-based and is easier to conduct. This applied research leads to the improvement of the healthcare quality and is the foundation for the development of hospitals on one hand, and larger hospitals can have more research centers and profits on the other hand.

3) *Medical specialist training*

Since physicians and medical staff carry out the duties of teaching and treatment, their skills are improved in teaching hospitals; also, teamwork creates more opportunity for students to learn and can acquire the experience of the medical faculty. In fact, these hospitals have a paramount mission that is education and generating experienced physicians through excellent and essential clinical training. There is treatment cascade in teaching hospitals; in other words, all residents in different fields of medicine and with varying experience levels visit the patient. On the other hand, patients with complex and rare diseases mostly refer to these hospitals; therefore, learning opportunity is higher in teaching hospitals in comparison with private ones. The integration model in Iran is well-known and

much appreciated by other countries. Another benefit of teaching hospitals, often raised by the stakeholders, is the presence of experienced medical faculty and staff who can promote the quality of cares in teaching hospitals.

4) *Meriting from up-to-date medical faculty*

Most of the interviewees referred to up-to-date medical faculty in teaching hospitals and believed that therapies are based on scientific guidelines and references. On the other hand, the best equipped and diagnostic medical equipment are available in these hospitals. In fact, these hospitals are affiliated with medical universities, and modern treatments and the most complex interventions are initially carried out at the teaching hospitals. *“Because physicians and professors go sabbatical leave, they get familiar with new technology P18-36”*

5) *The benefits of teaching hospitals for patients*

Patients also derive benefits from teaching hospitals; according to educational deputies, due to large number of patients referring to teaching hospitals, only those patients who really need treatment are admitted and there is no place for induced-demand treatment. They believe that teaching hospitals have all-round benefit for people, and can serve the needs of all segments of society. In addition, patients benefit from up-to-date knowledge and experience of teaching hospital physicians. Medical payments are lower in teaching hospitals. However, if we wish to achieve the best treatments and outcomes in these hospitals, treatment process should be done under direct supervision of faculty attending.

Discussion

Most interviewees believed that there are both challenges and benefits provided by integrating education; research and therapeutic missions in the hospitals, there are in each of these dimensions, which we can be overcome through proper management and standardization. The educational challenges had the highest frequency in comparison with the other two challenges. The most important educational challenges related to the decline of educational mission attendance in these hospitals created due to various factors such as the large number of patients' referral and self-regulation of hospitals leading physicians towards treatment. The other reason is lack of implementation of standards, which is consistent with findings reported by the American Hospital Association that revealed challenges of teaching hospitals includes lack of funding, particularly in the field of education, lack of adequate equipment and educational environment needed for medical students and residents, the quality of care decrease because of focusing on the education, and the interferences between education and treatment missions (13).

In addition, Zolfaghari showed that the current status of educational environment and clinical education of assistants had shortcomings requiring further consideration (14). Also Moshki and Ramazanpour indicated that medical education is not well done in teaching hospitals that are self-regulated and poor medical education may even have a negative impact on overall hospital performance (15). Mir Ismaili and Nekoi Moghaddam also revealed that there are no suitable educational facilities such as library, educational environment, and diagnostic facilities in teaching hospitals and the number experienced lectures is limited with respect to the number of medical students. The responsibilities of interns in teaching hospitals are unclear, there are problems with structural and system issues, educational areas, many responsibilities are assigned to interns, and there the lack of learning guidelines in clinical settings that need further investigation by health planners in teaching hospitals (16). In addition, Hukman et al. demonstrated that rotation job of medical residents in teaching hospitals reduces the efficiency of treatment by increasing resource efficiency. Ultimately, it reduces quality of care; however, the effect of rotation job of medical residents diminishes with increase of educational intensity and size of teaching hospitals (17) which is consistent with the hospital managers' view in the current investigation.

Regarding the treatment challenges posed by its integration with education, most stakeholders pointed out quality of health care services and ethical issues related to the patients, including increased medical errors due to students' inexperience, prolonged and delayed treatments because of treatment hierarchy, the lack of hospital facilities and beds, a large number of patients' referral, and lack of financial, human, and equipment resources. These results are consistent with the findings of Ahangar et al in financial shortage, and also Tez which indicated that the integration of quality and safety missions between medical graduates and teaching hospitals is a necessary step. They also showed that the integration of quality and safety in the teaching hospitals does not happen quickly and easily; therefore, sufficient time, coordinated efforts, commitment of both heads of the teaching hospitals and medical departments, and the environmental engagement with education are required.

Moreover, they showed that by simultaneous implementation of quality and safety, this culture can be created in teaching hospitals; and safety and quality can be seen not as part of accreditation but as a marker of successful learning (18, 19). Also the findings of Padmore et al. showed that medical students committed a lot of errors but due to some reasons such as fear of intimidation, the fact that they are temporary service providers, and generally due to personal, environmental and systemic barriers such as organizational culture, they refuse to accept and report their medical errors. They are the property owners of the error and therefore, in the educational hospitals, they have to consider aspects of the safety of patients, so they should invest on them to become owners who are in the process of initiating a reduction of mistakes (20). Association of American Medical Colleges reports indicated that teaching hospitals outperform private hospitals concerning some diseases is in contrasts with our findings. Moreover, the Association of American Medical Colleges report confirmed that there are still some problems with teaching hospitals in comparison with other non-teaching hospitals such as long waiting list and the low quality of some services which are, of course, worth considering (21).

The results of research challenges in teaching hospitals, which were less tangible and fewer, most scholars believed that appropriate research structures have not yet been defined, it has no infrastructure, and quality of conducted research is low and not in line with the other missions. In addition, they pointed out to inappropriate equipment and human facilities. The results of this study coincided with the findings of a study conducted by Haddadi et al. that revealing the necessity of proper management of the time and activities of the medical and paramedical departments in the teaching hospital with respect to research mission of the teaching hospitals. They also emphasized the necessity of reforming the administrative affairs in the research (22). Atashbahar et al. also revealed only through participation of all research and educational stakeholders, through educating concepts and flexible applicable methods, it is possible to develop and facilitate the implementation of programs by executive directors and employees (23).

Regarding the opportunities available in teaching hospitals in comparison with private and non-teaching hospitals, there are strengths creating from the combination of educational, therapeutic, and research missions. According to interviewees, these opportunities include potential of student presence, the feasibility of performing applied research, medical specialist training, up-to-date medical faculty and technology, and the benefits of teaching hospitals for the patients. These results coincided with the findings of a study conducted by Mirmoghtedaei et al. revealing that the integration of medical education with health care areas leads to the development of specialized human resources and the improvement of health indicators on one hand but decreases the quality of medical education and the provision of health care services in teaching hospitals on the other hand. In other words, the integration of goal and mission contributes to provision of appropriate educational, research, and therapeutic services that is the major task of available university hospitals (24). Also the American Hospital Association report suggested that US teaching hospitals have a very important role in providing health care services, especially for low-income people, and educational services (8). The results of Cooper Smith declared that teaching hospitals are an important part of the health system and cover a significant part of health education and research, which leads to empowerment and training of specialists in various disciplines (25).

Limitation of the Study

One of the limitations of this study is related to generalization of the results; in other words, given the developing status of each country, its health system, and their teaching hospitals, these challenges and opportunities may differ, so it is needed to do more studies.

Conclusions

Our findings showed that teaching hospitals, as one of the main sectors in the health system of the countries, play an important role in the provision of health services education and performing research; but in each of these sectors encounter of different challenges including low attention to education, not enough qualified therapeutic services and also less suitable research activities. Although opportunities and positive points are developed with the increase of these hospitals missions such as a broad environment for learning and doing research alongside providing efficiency curing services. Accordingly, practitioners, policymakers, and health system planners are recommended to pay special attention to teaching hospitals in order to remove their problems and focus on their potentials to create balance between their three goals until they can achieve all of them in order to provide high quality healthcare services to patients.

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