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Evaluation of Patient-Oriented Standards of Joint Commission International in Gilan and Mazandaran Teaching Hospitals

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Abstract

Background: Medical tourism, a multi-million-dollar industry, has had a significant effect in economic flourishing, creating jobs, and preventing the outflow of currency.
Objectives: The aim of this study was to evaluate teaching hospitals affiliated to Gilan and Mazandaran University of Medical Sciences, according to joint commission international (JCI) standards.
Methods: This was a descriptive cross sectional study conducted among teaching hospitals affiliated to Gilan and Mazandaran University of Medical Sciences during year 2015. To collect data and evaluate the hospitals, patient-oriented standards of JCI was applied.
Results: Amongst the eight standards, international patient safety goals (IPSG) (with a score of 87.5%) had the highest, and patient and family education (PFE) (with a score of 53.75%) had the lowest score. Hospital "4" with a score of 90.41%, had the highest, and hospital "7" with 58.90%, had the lowest rate of compliance to the standards. According to the Mann-Whitney test, the observed statistics considering a P value of $\leq$ 0.05 level, was not significant, therefore on a 95% certainty level, there was no significant difference between hospitals in Gilan and Mazandaran, regarding compliance with standards. Overall, the hospitals under study were relatively prepared for attracting medical tourists.
Conclusions: According to the results, it seems that more planning and implementation of projects is required to strengthen the axes of the joint commission regarding accreditation of hospitals and attraction of medical tourists to these centers, especially foreign tourists. Researchers are recommended to pay special attention to the university of medical sciences of two provinces for the establishment of standards and utilization of professional consultants.

Keywords: Medical Tourism, Patient-Oriented Standards, JCI, Gilan, Mazandaran, Hospital

1. Background

The term, medical tourism, generally refers to patients travelling out of their medical care region for achieving medical services; the expenses of these trips are usually covered by the patient themselves (1). Medical tourism is a subject that has recently interested individuals and beneficiaries, not just because of its economic capacities, yet because of the variable range of healthcare services offered (2). It has been reported that medical tourism has become a multi-billion-dollar industry and includes patients, who travel internationally to hospitals and clinics (3). In the recent decades, medical tourism has had a significant effect on economic flourishing, creating jobs and preventing the outflow of currency (4). Medical tourism, as a branch of health tourism, indicates a rapidly growing industry that has caused the creation of an atmosphere where patients go beyond national boundaries for receiving medical services. These services may include selective treatments, necessary and specialized treatments, large and small surgeries, dental care, and even routine checkups (5). For centuries people have traveled out of their country for treatment. There are numerous reasons for medical tourism, some are which are mentioned here: hygienic care is not available in some countries; some cannot wait for their national treatment system; some treatment services are not available in all countries; some prefer treatment in other countries. One of the main reasons behind travelling to other countries to receive medical treatment services is the low quality of treatment services in the source country. India, Thailand and Malaysia have been able to play an effective role in offering international services in the past decade, because of success in offering hospital services on an international level, successful marketing in this area, and influx of technology from advanced countries (6). Hos-

pital accreditation shows the presence and matching of superior international standards and their requirements in the healthcare industry (7). In some studies, accreditation has been mentioned as a factor guaranteeing quality among healthcare providers (8). Joint commission international (JCI), part of joint commission on accreditation of healthcare organizations (JCAHO), present standards for non-US countries that have been tested using evaluation methods in various countries. These standards are now considered the highest guarantee for healthcare providers in international markets (9). Accreditation standards of JCI are applicable for all healthcare organizations, and according to the world health organization, this program has had the highest effect on world accreditation standards (9). Iran has much strength for attracting medical tourists, including proficient physicians, up-to-date technology, and natural treatment regions. However, it has weaknesses and challenges as well (10); the most important is the rate of compliance of the country's healthcare facilities with international standards (11). Iran has faced challenges regarding basic healthcare infrastructures, governmental support, having a written medical tourism expansion plan, cooperation and harmony between large-scale and operational levels, and having internationally accredited healthcare centers; in fact none of the Iranian hospitals have been able to obtain JCI standards (12).

2. Objectives

This research aimed to evaluate patient-oriented standards of the JCI at teaching hospitals of Gilan and Mazandaran provinces.

3. Methods

This descriptive-analytical study was conducted during year 2015. It was performed on hospitals that a) complied with the general conditions as approved by the ministry of health for centers accepting medical tourists (13), and b) offered services targeted for medical tourism. This included five hospitals affiliated with Mazandaran University of Medical Sciences and three affiliated with hospitals from Gilan University of Medical Sciences. In this study, hospital managers, nursing services managers, technical managers of the pharmacy, radiology and laboratory, head nurses, training supervisors, health information system staff, and patient safety unit authorities were interviewed (100 people). The tool used for gathering the data was a translated checklist of patient-oriented standards of JCI including: international patient safety goals, access to care and continuity of care, patient and family rights, assessment of patients, care of patients, anesthesia and surgical care, medication management and use and patient and family education. This research tool included two sections: the first section contained questions regarding the general characteristics of hospitals, and the second section contained JCI patient-oriented standards questions with four available choices. Its validity was verified by a panel of experts and its reliability was measured by previous studies (14). Data analysis was performed with the SPSS version 16 software using descriptive and analytical statistics (Friedman test and the Mann-Whitney test). To calculate the points regarding the implementation of standards in the check-list, each of the standards were rated from 0 to 4, and the final results were expressed in terms of percentages. Thus, the option of "never" had zero point, option "rarely" one point, option "somewhat" two points, option "often" three points and the option "always" had four points.

4. Results

In this study, the eight selected hospitals from two provinces of Gilan and Mazandaran University of Medical Sciences were evaluated based on international standards of JCI, regarding preparation to attract medical tourists. Hospital "1" with 320 active beds was the biggest hospital in this study (Table 1). All eight hospitals were ranked with the first grade, according to the ministry of health accreditation program. Based on the results, among the eight patient-oriented standards, international patient safety goals (IPSG) with a score of 87.5% had the highest, and patient and family education (PFE) with a score of 53.75% had the lowest score (Table 2). Compliance with other standards were as follows; care of patients (COP) with 85.71%, assessment of patients (AOP) with 84.78%, access to care and continuity of care with 83.41%, medication management and use (MMU) with 76.56%, anesthesia and surgical care (ASC) with 74.61% and finally patient and family rights (PFR) with 68.58%. Hospital "4" with mean of 88.07% and hospital "7" with mean of 57.61% obtained the highest and lowest rank amongst the hospitals in this study. In this study, the Mann-Whitney test was used to determine the difference in compliance to standards among the hospitals in the two provinces, such that two research hypotheses, H_0 and H_1, were introduced. Considering the results of the Mann-Whitney test (Table 3), the observed result was not significant on a $P \leq 0.05$ level, H_0 was confirmed, and H_1 was declined. Hence, with 95% certainty, it can be said that regarding compliance to standards, there is no significant difference between the hospitals of Gilan and Mazandaran (Table 3). Finally, the Friedman rank test was used to rank the hospitals under study regarding compliance to

the eight standards. Based on the results, hospital "4" with 90.41% had the highest, and hospital "7" with 58.90% had the lowest rate of compliance to the standards (Table 4). According to the findings of the investigation of standards in hospitals, the main weaknesses in compliance with JCI standards, was patient and family rights (53.75%), among the four sub-standards of which, the option of organ donation with 37.5%, had the lowest rate and it seems that hospitals are facing major challenges in the field of organ donation culture.

5. Discussion

Utilization of quality services leads to saving in expenses, improvement in employees' spirit, patients' satisfaction, and effectiveness of expert service providers. It can be said that quality of services is an important factor that affects the growth, success, and endurance of organizations, and, as an effective and all-encompassing approach, is part of the agenda of organizations' management (15). With regards to medical tourism, international confirmation of care, quality of medical services, and medication, is very important (16). A study in 2000 showed that JCI accreditation, a very clear accreditation program for evaluation of all systems in a healthcare organization, makes international comparison of organizations, and creates a framework for managing quality (17).

The results of the present study showed that the average score in IPSG item in hospitals under study was 87.5%, which was the best score among the eight standards. Hospital "2" with 100% and hospital "7" with 57.5%, had the highest and the lowest positions. The main duty of hospitals is to provide quality care for patients, and meet their needs and expectations. This important mission is made possible via institutionalization of quality in hospitals, and patient safety is considered one of the main pillars regarding quality healthcare (15). Mousavi et al. (18), in their research with regards to safety considerations level in the radiology department of hospitals affiliated with the Tehran University of Medical Sciences showed that this department in studied hospitals is generally safe (80%).

Regarding access to care and continuity of care (ACC) standards, hospital "1" with 96.15% had the highest, and hospital "2" with 60.58% had the lowest rate of compliance. The average rate of compliance with this standard in the hospitals under study was 83.41%. In the study of Keshavarz et al. this standard obtained a lower score when compared with the present study (it was reported as 76.5%) (19). Based on the results of other studies, continuity of care is one of the factors with high priority for medical tourists (20). In another study, the possibility to continue treatment after return was considered an important effective factor on the growth of medical tourism (12).

Compliance with PFR standard was highest in hospital "4" in comparison to the average of all hospitals. The average among all hospitals was 68.58%. This standard had the lowest value, a value of 55%, amongst the mentioned standards in the study of Khodayari et al. (21). According to the findings of this study, the overall mean of compliance to PFR standard in the studied hospitals was 68.58%. The compliance to this standard in hospitals in both provinces was unfavorable. In another study, the most important factors that were mentioned as obstacles to honoring patient rights were: patients', nurses', physicians' and students' lack of awareness of patients' bill of rights, incomprehensive enforcement of Patients' Bill of rights in Iran, excessive work load of nurses and shortage of personnel, and hospitals being used as training centers. On the other hand, the most important approaches for improving this problem are: education regarding patients' rights, meeting organizational needs, improving the conditions related to top employees, and supervising the enforcement of patients' rights (22). Many hospitals offering medical tourism services are inclined to use indicators, such as AOP in order to improve their performance, and use their rate of following patients' rights and patients' satisfaction as their advantages for competing in medical tourism markets (14). AOP, in all centers included in this study, was relatively high (84.78%), due to the educational character of the hospitals and the presence of experienced professionals and assistants. Some studies indicate special limitations in the execution of these standards. In a study by Farzianpour et al. regarding the execution of patient-evaluation standards in Tehran medical silences university hospitals, these standards were considered functional, but their function required more effort from the hospitals. Execution and realization of these standards requires certain infrastructures, such as managers' knowledge regarding the principles and tools of improving quality, educating personnel regarding these standards, enacting quality management and organizational enhancement models, strengthening general functions in hospitals, and using the hospital information system (HIS) for all involved individuals (23).

COP standard, in the hospitals under study had a satisfactory condition (an average of 85.71%). This standard in hospital "4" with 100%, had the highest, and hospital "2" with 64.29%, had the lowest rate of compliance. The use of quality management and organizational enhancement models in hospital "4", including European foundation for quality management (EFQM) in the past few years, is one of the reasons for the growth of its standards. Patients' healthcare standards are one of the basic prin-

Table 1. General Specifications of Hospitals under Study

Mazandaran Province	Specialty	Number of Active Beds	Gilan Province	Specialty	Number of Active Beds
Hospital 1	General	320	**Hospital 6**	Heart	141
Hospital 2	General	250	**Hospital 7**	Psychiatry	222
Hospital 3	Heart	170	**Hospital 8**	Trauma &Accidents	263
Hospital 4	Psychiatry-Burning	200			
Hospital 5	General	214			

Table 2. Average Total Patient-Oriented Standard Scores Among Hospitals in Both Provinces

Standard	No. of Proposition	Hospital															
		5		4		2		3		1		7		8		6		Total	
		%	Score	%	Score	%	Score	%	Score	%	Score	%	Score	%	Score	%	Score	%	Score
IPSG	10	97.5	39	95	38	100	40	90	36	70	28	57.5	23	97.5	39	92.5	37	87.5	35
ACC	26	85.58	89	93.27	97	60.58	63	79.81	83	96.15	100	75	78	88.46	92	88.46	92	83.41	86.75
PFR	10	73.68	56	85.53	65	57.89	44	73.68	56	34.21	26	64.47	49	77.63	59	81.57	62	68.58	52.12
AOP	38	96.0	146	98.68	150	80.92	123	62.5	95	90.79	138	57.89	88	95.39	145	96.05	146	84.78	128.87
COP	14	98.21	55	100	56	64.29	36	67.86	38	100	56	69.64	39	91.07	51	94.64	53	85.71	48
ASC	16	75	48	76.56	49	85.94	55	79.69	51	87.5	56	0	0	98.44	63	93.75	60	74.61	47.75
MMU	18	90.28	65	80.56	58	26.39	19	91.67	66	80.56	58	76.39	55	84.72	61	81.94	59	76.56	55.12
PFE	5	75	15	75	15	20	4	20	4	65	13	60	12	55	11	60	12	53.75	10.75

Abbreviations: ACC, access to care and continuity of care; AOP, assessment of patients; ASC, anesthesia and surgical care; COP, care of patients; IPSG, international patient safety goals; MMU, medication management and use; PFE, patient and family education; PFR, patient and family rights.

Table 3. Compliance to Standards Among Selected Hospitals in Gilan and Mazandaran

Standard	No.	Mean	Standard Deviation	Statistic	P Value
IPSG	8	35.00	6.14	5.50	0.54
ACC	8	86.75	11.92	7.00	0.88
PFR	8	52.12	12.52	5.00	0.45
AOP	8	128.87	24.57	6.50	0.76
COP	8	48.00	8.75	6.00	0.65
ASC	8	47.75	19.98	5.00	0.45
MMU	8	55.12	15.05	7.00	0.88
PFE	8	10.75	4.39	6.000	0.64

Abbreviations: ACC, access to care and continuity of care; AOP, assessment of patients; ASC, anesthesia and surgical care; COP, care of patients; IPSG, international patient safety goals; MMU, medication management and use; PFE, patient and family education; PFR, patient and family rights.

Table 4. Rankings of Gilan and Mazandaran Hospitals

Hospital No.	Coefficient	Rank	Percentage Score Acquired
4	5.89	1	90.41
8	5.67	2	89.22
6	5.61	3	89.21
5	5.50	4	87.84
1	4.72	5	83.05
3	4.00	6	73.46
2	2.67	7	65.75
7	1.94	8	58.90

ciples for acquiring JCI certification (24). ASC standards in this study, with an average of 74.61%, had a medium condition compared to other standards, whereas in the study by Keshavarz et al. (19), these standards were ranked highest among the standards being analyzed. Medication safety and anesthesia techniques are considered important items, in some related studies, as pre-requisites for offering medical tourism services by hospitals (25). Observing anesthesia standards is necessary, and it is mandatory for the current condition to be evaluated before, during, and at the end of anesthesia administration, based on the standard checklist, and in case there is a problem, a logical solution should be offered (26).

Regarding MMU, the average among the eight hospitals mentioned was 75.56%, which is an acceptable average. This result was lower than the results of Khodayari et al.

(21), (an average of 78%). The process of patient care is the main part of the function of nursing, and medication orders are an important part of the process of patient treatment and care. Insufficient attention to correct principles in administering medications can result in many moral and professional issues (27).

The final patient-oriented standard of JCI analyzed in this study, was PFE, with an average of 53.25%, which is similar to the results of Keshavarz et al. (52.5%) (19). This shows the weakness of hospitals in PFE. The point of patient education is assisting the improvement of the quality of life, enhancing physical-mental health, and strengthening their self-confidence (28). The result of Khodayari's research about the compliance rate of patient and family education standards in selected hospitals in Tehran (59.57%) is close and consistent with the results of this research (53.73%) (5). One of the basic needs of patients is receiving clear and sufficient information (29). Medical tourists that visit hospitals in developing countries for various services, have expectations regarding their preferences according to their native culture. These expectations should be considered during their education (30). The most important limitations of this study included the large number of hospitals and investigated section, long distance between hospitals in the provinces of Gilan and Mazandaran, lack of familiarity of a large number of managers and staff with international accreditation and quality issues, few similar research and lack of ease to use documentation of clinical records of patients. The results of this study showed that the hospitals under study had relative readiness for execution of credible international standards, and attracting domestic and international medical tourists. This readiness was more in some standards and less in others. Previous studies have shown that generally, private hospitals have more acceptable standards compared to university hospitals (19). Researchers recommend paying special attention to the universities of medical sciences of the two provinces to establish standards and utilize professional consultants. Furthermore, informational advertisements on an international level can attract medical tourists (31). Considering the fact that in Khodayari et al.'s study (21), Keshavarz et al.'s study (19), and this study the PFE standards did not have an acceptable situation, attention to establishing effective connections, using new methods for improving quality, and bolder presence of the hospitals education units seems necessary.

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Footnote

Authors' Contribution: Ghahraman Mahmoudi developed the conceptualization and design of the study. Ghasem Abedi analyzed and interpreted the data, results and discussion section. Salman Ghaseminejhad collected the data and cooperated in writing and editing of the methods.

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