

Accreditation Maternity and Obstetric Services (MOS), Based on the Accreditation Standards of the Joint Commission International (JCI)

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Abstract

Background: In recent years various standards have been proposed for assessment and supervision of healthcare systems. One of the most popular of them in health care area is Joint Commission International (JCI) standards of US. This study has been conducted to investigate executive potentials related Accreditation Standards of Maternity and birth services of this commission in hospitals providing maternity and birth services in Ardebil Province. **Methods:** This is a descriptive-analytic study conducted as cross-sectional on 232 employees of three hospitals in Ardebil including Alavi, Arta and Sabalan who were randomly chosen. This is a multi-stage study that in stage 1, an accreditation tool for maternity and birth services was designed based on JCI standards. Validity and reliability of questionnaire was measured by Alpha Cronbach. In stage 2, score of different dimension of Accreditation Standards of MOS was calculated using data obtained from questionnaires distributed among a sample of 232 hospitals personnel; all of them were working in maternity and birth field. Statistical tests used are one-way analysis of variance (ANOVA), dunnets post hoc and correlation test that all of them were calculated by SPSS V. 18. **Results:** Result

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showed that all of the MOS accreditation standards components were capable in selected hospitals. Arta hospital earned the highest score of standards (mean = 149/4) and Alavi hospital received the lowest score (mean = 128/04) of the maximum attainable score (186). Also, significant difference was observed between selected hospitals in total score of MOS standards ($F = 50/432$, $p < 0/00$). Conclusion: Based on study findings, there is an inequality between Ardebils hospital in field of MOS accreditation standards. Public hospitals are in more difficult situation compared to private hospitals, therefore Health Care System policy makers must pay attention systematically and specially to implementation of international standards in order to improve health care impacts in public hospitals.

Keywords

Accreditation, JCI Standards, Maternity and Obstetrics Service, Selected Hospitals

1. Introduction

Shortage of resources and constant change of environmental conditions makes it necessary to monitor and evaluate the way of using resources more than ever [1]. Therefore, the need for adopting new approaches for management and evaluation of health care organizations based on international standards is an understood necessity [2]. During the last two decades a wave of external evaluation systems has affected providing health care services worldwide [3]. Government, service consumers, professional medicine associations, managers of insurance companies and other beneficiaries are all trying improve quality of providing health care services through accreditation of activities in order to respond the society [3]-[5]. In many industries, accreditation is recognized as a symbol of quality by which the organization will achieve certain performance standards and provide an opportunity for an organization that works to promote the national or international standards [6]-[8]. Accreditation process in which a group or organization by assessing the ability of a hospital to perform certain services as standard, reputation and recognition is given [2] [4] [5]. According to the International Joint Commission states first, what is referred to as validation of the constant activity as a result of these organizations, evaluate their processes and takes action to correct it. Strive for continuous improvement, In particular, the hospital will help them as much as possible to achieve the highest level of quality, service and patient care beyond the hospital can spend its resources more wisely and avoid large expenses doing [2] [7] [9]. The purpose of accreditation of health care organizations improve the quality of health services, improved integration of health services management, database creation and organization of health services, increase safety and reduce risks to patients and staff, providing education and counseling for health service organizations and reduce the cost are focused on increasing the efficiency and effectiveness of services [10]. Determine the validity and level of hospitals in health circles as “accreditation” 2. Using the auditing standards in recent years in developed countries and some developing countries is common, trusted and indispensable technique for measuring the performance and quality of health services considered [9]. Through hospitals and health care centers to comply with the existing standards, their service quality and safety in mind in order to improve the health care provide [11]-[14]. Joint Commission International Accreditation Standards as an effective quality evaluation and management tool, has attracted worldwide attention [2] [4] [7] [10]. Measuring the quality of inpatient care, obstetrics and gynecology has attracted enormous interest in recent years, since the first multi-channel service delivery ward includes activities such as surgical procedures (such as cesarean delivery or removal fibroids), Critical Care Obstetrics (such as contraception and menopause management), diagnostic procedures (ultrasound) and maternal care (care before and during labor). Secondly, any hospitalization and birth has an impact on the health of two individuals. Thirdly, midwifery is one of very heavy medical specialties that is greatly affected by patient satisfaction and complaints [15]. In 2008 in France, 66 percent of medical malpractice cases involving midwives were associated errors. Many women are hospitalized because of problems with the delivery [16]. Access to hospital services and improving quality, the only way to reduce maternal mortality has been reported [17] [18]. Quality improvement is one of the five global strategies to improve programs of reproduction health announced in 2004 [19].

Investigating the quality of maternity services in the public health system and private sector is one of research priorities of the Ministry of Health and Medical Education.

Basically, the aim of assessing the quality of services is recognizing weaknesses for strengthening the programs [20]. Quantitative and content evaluation of these cares and improving quality of services will definitely have effective role in enhancing health of mothers and children [21].

Special features in the hospital service sector, particularly in Obstetrics and Gynecology due to the type of referees and its direct impact on the prognosis remedial measures has always been base of people's judgment on performance of Ministry of Health and Medical Education in recent years [22] [23].

Studies in the field of maternity and birth services accreditation have a lot of limitations on the use of valid instruments to collect data and evaluation method of Accreditation [24] [25].

Accreditation of maternity and birth services provide conditions for growth and quality improvement and effectiveness, so that offer services with the least cost and time with the greatest satisfaction and efficiency [22] [26]. Given the importance of maternity and birth services sector in hospital in health and survival of referee, it seem that providing a higher quality service in this part is very important; and this quality should be measured in the most appropriate way and the dimensions affecting performance and promotion of performance are identified and measures are taken to modify processes and different aspects.

On the other hand, considering the major drawbacks with regard to the evaluation system of hospitals and health care organizations of Iran in fields of evaluation tools (questions are not standard, there is ambiguity and they are subjective), evaluation process's not being standard, data collection and record system's not being standard, researchers decided to perform a study entitled Evaluation of maternity and birth services from point of view of the related medical and health care staff and medical perspectives are relevant.

2. Materials and Methods

A cross-sectional study is implemented in terms of methodology and the goal is to form an applied research field. The research study, three hospitals providing maternity services and unskilled labor in Ardabil (Alavi Hospital (Government) Hospital, Arta (private) hospital sabalan (social security), respectively). The study consisted of two consecutive steps in Phase I to determine the functionality of maternity and obstetric services, the Joint Commission International Accreditation Standards and secondly to determine the rating standards of the hospital study. To determine the sample size and sampling a list of all personnel associated with maternity and delivery of employment services centers, according to the study prepared by sample size and Morgan Kruejesy formula the volume of using calculated societies It was determined that a sample size of 260 hospitals personnel in the study, 232 hospitals personnel attended and the response rate of 88 percent was estimated:

$$n = \frac{X^2 NP(1-P)}{d^2(N-1) + X^2(1-P)}$$

N: Sample size requirements.

X^2 : Chi-square table value for 1 degree of freedom at the desired confidence level (3.841).

N: Number of community.

P: Proportion of the population (which is considered to maximize the sample size 0.5).

d: Degree of precision that can be considered 0.05.

The tool for data collection in this study was obtained from a questionnaire booklet "International Joint Commission accreditation standards", which consists of four main domains and 62 was standardized. Questions about the accreditation of maternity and obstetric services are closed and three option (applicable, to the extent applicable and non-applicable) for the first and the options (yes, no or partially) It was asked for the second phase. To answer the second part of the question at this point (yes/applicable) to zero (no/unenforceable) and the total points awarded reflect the views of the staff accreditation standards in the Department of Obstetrics and Gynecology review. Accreditation Questionnaire maternity and obstetric services for the first time in this study was used. Since the question of maternity and obstetric care quality improvement comes from the book "International Joint Commission accreditation standards" is, in order to eliminate possible deficiencies in comparison with the original version was done by the researcher and then to evaluate the content validity of the questionnaire provided 10 professors and academic departments and experts were asked to comment on the questionnaire. The questionnaire was modified according to their comments. To assess the reliability of the questionnaire, Cronbach's alpha coefficient of the questionnaire was completed by 32 hospitals personnel in the first stage of the study population and the purpose of calculating the 834/0 is reported. Data from the questionnaires using the software SPSS V. 18 and analyzed using one-way ANOVA, post hoc test Dennett-Spearman correlation test was analyzed.

3. Results

Information regarding employees participating in the study was presented in **Table 1**.

Statistical data pertaining to key areas of maternity and obstetric services and related standards of the Joint Commission International Accreditation Manual (**Table 2**) shows four main dimensions MOS.

Levine's test results showed that the size of Manpower ($L = 12.3$), Physical space ($L = 16.4$). And process ($L = 5.9$) in the $p < 0.00$. And after heterogeneous variance for a $L = 0.5$ Homogeneous variance between hospitals in the study. One-way analysis of variance on the total score standards in maternity and obstetric services in hospitals in the study (**Table 3**) showed that not only in all aspects except for the following process is a significant difference. The mean score of the total rating. The standard also shows significant differences in the studied hospitals. In the next workforce ($p < 0.00$, $F = 85.171$). Aretha and Alavi hospitals with the highest score out of 17.46 and 12.34 lowest heavenly reward points on average, the mean difference was found between the hospitals. In terms of the physical space ($p < 0.00$, $F = 36.383$). Significant difference Aretha hospital with an average score of 39.90 highest averages compared to other hospitals achieved. In relation to post-process ($p < 0.06$, $F = 9.270$), no significant differences were found between hospitals, but the hospital would be the next Aretha's highest rating. In

Table 1. Demographic characteristics of employees participating in the study.

Variable	Component	Statistical indicators			
		Frequency	%	The cumulative frequency	%
Sex	Man	52	22.4	52	22.4
	Woman	180	77.6	232	100
Type of employment	Official	73	31.5	73	31.5
	Pact	110	47.4	183	78.9
	Contract	49	21.1	232	100
Employment history	<5	63	27.2	63	27.2
	5 - 10	52	22.4	115	49.6
	10 - 15	37	15.9	152	65.5
	15 - 20	33	14.2	185	79.7
	>20	47	20.3	232	100
Degrees	The diploma and diploma	33	14.2	33	14.2
	Bachelor	127	54.7	160	68.9
	MA	46	19.8	206	88.7
	Doctor and specialist	26	11.3	232	100
The age distribution	>25	12	5.3	12	5.3
	25 - 35	90	38.8	102	44.1
	35 - 45	73	31.5	175	75.6
	>45	57	24.6	232	100
Organizational position	Nurse/midwife	94	40.5	94	40.5
	Physician/specialist	26	11.2	120	51.7
	Manager/matron	43	19.9	163	62.9
	Director of	46	19.8	209	82.7
	Other	23	10.6	232	100

Table 2. Status of various aspects of the standard MOS.

Row	Standard dimensions	Average rating	SD	Standard error	The first quartile	The third quartile	Minimum scores	Maximum Score
1	Manpower	15.91	2.9	0.513	14.25	18	9	21
2	Physical space	36.97	3.87	0.685	33	40	30	49
3	Process	30.13	3.96	0.701	28	33	21	37
4	Equipment	53.19	5.1	0.903	48.75	56	41	69

Table 3. One-way analysis of variance on the total score standards.

Source of change	Sum of squares	Degrees of freedom	Mean square	Statistics <i>F</i>	Significance level
Variance between groups	15528.640	2	7764.320	50.342	0.00*
Within-group variance.	35319.114	229	154.232		
Total	50847.754	231			

conjunction with the equipment ($p < 0.00$, $F = 45.643$), the results showed significant differences among the hospitals which opened out private hospital Arta highest average (60.44) and State Hospital Alavi (56.40) received the lowest. Dennett hoc test results show that the private hospital than the hospital sabalan Arta, especially compared to the state hospital Alavi highest rating in all aspects of labor standards in maternity services and the highest rating is a significant difference demonstrate compliance with the standards in this hospital is better.

The total score of maternity services and labor standards in the age of employees ($p = 0.028$, $r = 0.434$) and work experience ($p = 0.00$, $r = -0.413$) or indirect relationship with the education ($p = 0.045$, $r = 0.215$) show a direct relationship. Also based on the results of Chi-square and phi coefficient and Cramer ($\chi^2 = 5.535^a$, $v = 0.154$), the recruitment of a significant relationship with the total score standards in maternity and obstetric services increased.

4. Discussion

This study examines the accreditation standards functionality of the International Joint Commission for obstetric and maternity services in the country level, for the first time. The results indicating the applicability of accreditation standards in health care, as considered maternity and obstetric care and services in the present study, were supported by other studies [27]-[30]. Farzianpour *et al.* (2014) have studied the Care of Patient Standards (COPS), patient-family education standards (PFE) and the standards of the patient-family rights (PFR) in their articles, in which, dimensions of International Joint Commission standards have the functionality to all study hospitals and a very small number of components have been removed. The results of the study also indicate that these standards are not fully provided through hospital accreditation standards developed by the Ministry of Health and Medical Education of Iran [1] [6] [7] [14]. The results of the study showed that, apart from the aspect of process, there was a significant difference between the four aspects of maternity and obstetric care accreditation standards at the level of $p < 0.01$ [22] [31], that the average score for Aretha private hospital was higher than that of Sabalan hospital and also the amount was higher for Sabalan hospital than that of Alavi hospital, in all aspects. Accordingly, it seems that private hospitals adhere to dimensions of accreditation standards more properly in compared to social security hospitals and public hospitals [9] [25] [32].

However, due to the nature of Alavi hospital that is a public and multi-specialty hospital, and the volume of referrals from inside and outside the city and province; The low score of different aspects of the standards is not far-fetched, and on the other hand, given that Aretha hospital is a private hospital with limited specialties and low volume of referrals and the increased amount of fees received, there is a higher level of standards, particularly in the dimension of physical space, human resources and equipment in compared to other hospitals [12] [22] [23]. As the study showed, in terms of process, there was no significant difference between hospitals. This suggests that the hospitals in terms of the tasks associated with maternity and obstetric services go through similar

processes in number and time of operation [12] [33] [34].

Similar to previous findings, there was a significant difference between hospitals in terms of total score of accreditation process. Total score of accreditation standards for maternity and birth services ranged from a minimum of 62 to a maximum of 186, accordingly, among three hospitals, Aretha private hospital had the highest score (149.40) of accreditation standards followed by Sabalan Hospital (132.44) and Alavi Hospital (128/04), respectively. There are studies that have examined the differences in public and private hospitals in the quantity and quality of services in other functional fields [22].

The researchers sought to determine the influence of demographics factors of the personnel participating in the study on the total score of accreditation standards achieved in the hospital and thus, variables including age, education, work experience, employment and organizational position standards were examined in relation to the total score of accreditation standards, accordingly there was a significant and indirect correlation between age and experience and total score of accreditation standards [6] [14] [32] [35]-[37] and a significant positive correlation between education and the score [7] [14]. On the other hand, the variables, organizational position and employment, were examined at the same time and the employment showed significant positive correlation with total score of accreditation standards for maternity and obstetric services, However, there was no significant correlation between organizational position and the total score [6] [14] [15] [38].

5. Conclusion

Based on the study results of data analysis, increased attention must be devoted to international standards in the country's hospitals, particularly the public hospitals that are the focus for patients' referrals. Given the importance of the public hospitals in the promotion of justice and accountability for a large portion of the population, due to the high volume of referrals to public hospitals, more considerations must be done in policy-making and managing public institutions, and specialized committees bringing in specialists should be established at the hospitals towards quality improvement. The need for short-term and long-term training is necessary to justify older and experienced employees who take more negative attitudes toward the new standards. Finally, in view of long bureaucracy regarding the establishment of international standards and implementation monitoring that leads to deficiencies in the process of standards implementation at the operational level, new approaches are needed to communicate relevant circulars and attract managers and staff participation in decision-making and implementation of standards to facilitate applying these standards in educational hospitals, especially public hospitals. One of the shortcomings of the present study is considering Joint Commission International Accreditation Standards for maternity and obstetric services, and it is recommended to study other standards of the commission in different parts of health care in future research. Also, due to the limited number of study centers (3 hospitals) generalizing results would not be possible and it is recommended to conduct a study at national and regional level.

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Abbreviations

MOS: Maternity and Obstetric Services;
JCI: Joint Commission International;
TQM: Total Quality Management;
COPS: Care of Patient Standards.

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