

HOW FAR REMAINS TO REALIZATION OF ACCREDITATION STANDARDS IN INTENSIVE CARE UNITS? A FIELD INVESTIGATION BASED ON ACCREDITATION PRINCIPLES

Rahim Baghaei¹, Khatereh Almasi^{2*}

1. *Associate Professor, Patient Safety Research Center, Urmia University of Medical Sciences, Urmia, Iran*
2. *Master of Medical Surgical Nursing, Faculty of Nursing and Midwifery, Urmia University of Medical Sciences, Urmia, Iran*

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ABSTRACT

Introduction and objective: Compliance with accreditation standards in intensive care unit (ICU) will result in reduction of preventable mortality and costs. Standard and the importance of its application in ICU have been neglected in Iran. The aim of this study is to determine the distance to compliance with accreditation standards of ICUs in educational-therapeutic centers on Urmia University of Medical Science.

Method: this study was conducted in 4 educational-therapeutic centers by descriptive cross sectional method. The data were collected by accreditation standard evaluation checklist of ministry of science which was derived from standards of joint commission international (JCI). Data analysis was carried out by curves and descriptive statistics.

Findings: out of 139 scores evaluated in 8 aspects for ICU, the highest and lowest scores were 109 and 64, respectively. Also, out of 121 scores evaluated in 8 aspects for cardiac care unit (CCU), the highest and lowest scores were 89.5 and 74, respectively. Accreditation standards were more complied in CCU as compared with ICU.

Conclusion: in spite of gaining grade one in evaluation of 2015, the sum of mean scores on ICUs in all 4 educational-therapeutic centers was obtained 57.9% which is low in terms of total score of standards, the difference between the evaluations of ministry of health and international standards on ICU shows that some measures have to be taken to resolve the problems

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Introduction

Critical condition of patients in ICU has made this unit as one of the most important sections of hospital [1]. The reason for such emphasis on care units is higher need of hospitals to this section. If complied, the standards of ICUs can result in saving of costs and prolonged age of patients as it prevents from the management errors and reduce the preventable mortalities [2,3]. The other reason for high significance of standard compliance is that these units have been recognized as the focus of hospital function control [4]. In developed countries, numerous studies have been devoted to establish the standards for ICUs which have attracted the attention of several organizations. For example, National Environmental Policy Act (NEPA) and Joint Commission on Accreditation of Healthcare Organizations (JCAHO) each of which have established some standards for health care institutes. Design of ICUs and modification of their current conditions not only requires the knowledge of standard establishing institutions. But needs the experience of medical staffs who are familiar with the priorities of care units patients. In 1988, society of critical care medicine (SCCM) presented guidance for ICU design; however, standardization and its application importance have been rather neglected in our country [5]. JCAHO is the mother of accreditation in the world

Corresponding Author: Khatereh Almasi, Master of Medical Surgical Nursing, Faculty of Nursing and Midwifery, Urmia University of Medical Sciences, Urmia, Iran. Email: khatereh.almasi65@gmail.com

which not only covers all types of health service providing centers, but also addresses the accreditation of the organizations which are effective on health but are outside the realm of health system. This organization has proper standards for primary health and declares objectives and measurable elements for all its standards [6]. Accreditation standards were designed by two American non-governmental and nonprofit organizations; namely JCAHO (Joint Commission on Accreditation of Healthcare Organizations) and JCI (Joint Commission International) [7]. The concept of accreditation was first introduced in 2002 by JCI [8]. International hospital accreditation standards of globally joint commission are unique tools designed for measuring the quality of care and patient safety [9]. Accreditation is a volunteer-based and accessible process capable of evaluating health care system. In an organization, it is an evident commitment to improve quality and safety of patient care, reassure on safe care environment and continuous activity to reduce the risks for patients and staff [10, 7]. In other words, accreditation is a part of process by which an organization, by assessment, grants to a hospital reputation, credibility and formal qualification for presenting a particular standard service [11,12]. In Iran, hospital assessment is conducted based on the standards of ministry of health and medical education [13,14]. Accreditation has been recently recognized as one of the methods to guarantee and enhance the quality of medical education in Iran and some measures have been taken to establish the structures of accreditation in hospitals [15]. Supervision and accreditation office of ministry of health and medical science substituted treatment centers' assessment by accreditation model in 2007 [16]. Souri study showed that evident-based instructions in accreditation can reduce the rate of hospital infection diseases among ICU patients [17]. In Egypt, a study was conducted with the aim of determining the effect of non-governmental health units' accreditation on patients' satisfaction which revealed that patients' satisfaction is significantly higher in accredited health units as compared with those lacking accreditation certificate [18]. Study of Sahebzadeh showed that the level of compliance with CCU standards was medium in Isfahan. However, increasing the efficiency of the intensive care units by compliance with standards in different fields requires further attention and precision of hospital authorities [19]. Yavari showed that there is a significant difference between the results of assessments made by ministry and national and international standards which has to be resolved [20]. The ministry of health and medical education has conducted some different strategies related to patient safety and patient-oriented approaches [21]. Among these strategies, comprehensive approach to patient safety, seven steps toward patient safety [22], annual assessment of hospitals, usual inspection of hospitals in 1997, implementation of "clinical dominance" principle in 2009, "safe and patient-friendly hospitals" in 2010 and "hospitals evaluation program" based on patient safety and patient-oriented approaches in early 2012 can be mentioned [21]. However, these evaluations are not sufficient, continuous evaluation of health and treatment centers by valid domestic and international standards are rather useful for identification of weak points and their resolve and improvement [23]. It seems that the issues of standards and the significance of their application in special units of treatment centers have been rather ignored especially in terms of continuous patient care and evaluation [2]. Regarding that and also the importance of accreditation in hospitals according to standards, this study is aimed to determine the extent of compliance with accreditation standards in ICUs of centers under cover of Urmia University of Medical Science.

Methodology

This descriptive study was conducted to investigate the level of compliance with accreditation standards in ICUs of educational-therapeutic centers under coverage of Urmia University of Medical Science which included 16 ICUs and CCUs in winter 2016. Data collection was carried out by instructive checklist of accreditation standards of ministry of health and medical science which were derived from JCI standards. In this checklist, one or several criteria were designed for evaluation of each standard. Below each criterion, a scoring table is located which includes four main columns of documents, observations, interview and score. In case of interview and observation of each aspect, 5 to 10 cases were investigated. Interviewed people included doctors, nurses, patients and their companions. Scores were ranged from 0 to 2 and non-evaluable. By means of these checklists, the required data for investigation of compliance with accreditation standards could be collected in 8 aspects including management and organization, policies and methods, admission in the unit and patient evaluation, nursery report, medical report, continuous patient care and evaluation, facilities and requirements and physical safety in ICU and CCU. The checklist was derived from the book of national accreditation standards of Iran whose reliability was confirmed by experts in treatment deputy of ministry of health and medical science. A team of ISU experts and nursery and medicine experts were involved in its collection [7]. As the mentioned checklist was approved by the center of supervision and accreditation of treatment affairs in health deputy of ministry of health and medical science, its reliability was confirmed. After acquiring permissions and recommendation letters from the university to deputy of health, the required coordination was made and the investigations started. The quantitative data were analyzed by adaptive curves and descriptive statistics.

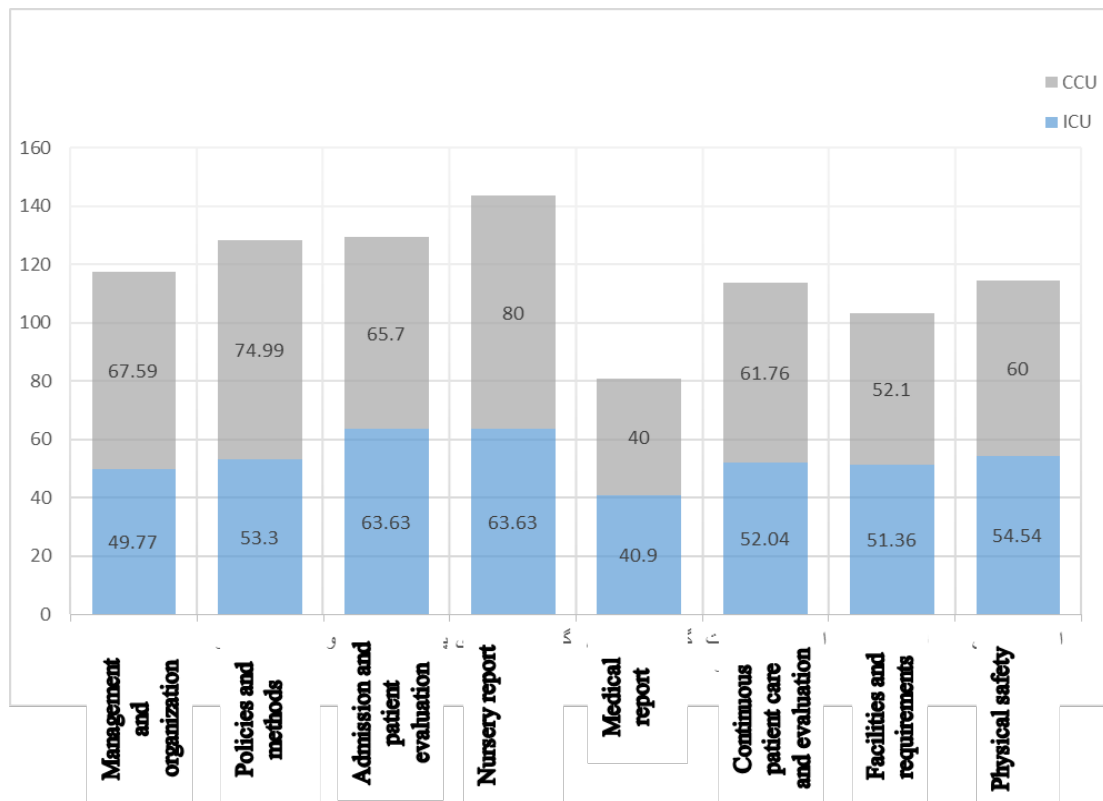
Findings

The scores of intensive care units in the four studied hospitals were as follows: out of 21 scores for management and organization, for CCUS, the highest and lowest scores were 16.5 and 8.5, respectively. These scores were 13 and 8 for ICUS with the same order. Out of 22 scores in terms of policies and methods, the highest and lowest scores of ICUs were 20 and 6, respectively. For the same aspect, the sum of scores was 12 for CCUs in which the highest and lowest scores were 11 and 7,

respectively. For the aspect of admission in the unit and patient evaluation, out of 28 scores, the highest scores of ICU and CCU were 24 and 20, respectively. The lowest score of ICU was 16 while CCU had the lowest score of 17. Out of 4 scores for the aspect of nurse report, the highest scores of all units were 4 and their lowest score was 2. In terms of doctor report, out of 7 scores, the highest and lowest scores were 2 and 0 for ICU and 1 and 0 for CCU. The sum of ICUs scores was 40 for aspect of continuous patient care and evaluation with highest and lowest values at 35 and 16, respectively. For the same aspect, out of 34 scores in CCU, the highest and lowest scores were 23 and 19, respectively. For the aspect of facilities and requirements, out of 20 scores for ICU, the highest and lowest scores were 12 and 6 respectively. For the same aspect, out of 18 scores for CCU, the highest and lowest scores were 10 and 8, respectively. In terms of physical safety, out of 2 scores, the highest scores of ICUs and CCUs were 2 and their lowest scores amounted to 0.

The sum of scores for all four hospitals was 186 out of 336, 174 out of 302, 288 out of 448, 44 out of 64, 12 out of 32, 334 out of 610, 160 out of 310 and 18 out of 32 in terms of management and organization, policies and methods, admission and patient evaluation, nursery report, medical report, continuous patient care and evaluation, facilities and requirements and physical safety of patient, respectively.

The mean of compliance with accreditation standards in educational-therapeutic centers of Urmia University of Medical Science is 54.8%, 61%, 65%, 67.9%, 47.5%, 58.6%, 51.5% and 56.6% in aspects of management and organization, policies and methods, admission and patient evaluation, nursery report, medical report, continuous patient care and evaluation, facilities and requirements and physical safety, respectively. In the other words, out of 139 scores of ICU in 8 studied aspects, the highest score was 109 and the lowest one was 64 among all ICUs of educational-therapeutic centers of Urmia University of Medical science. Furthermore, out of 121 scores of CCU in 8 examined aspects, the highest score was 89.5 and the lowest one was 74.

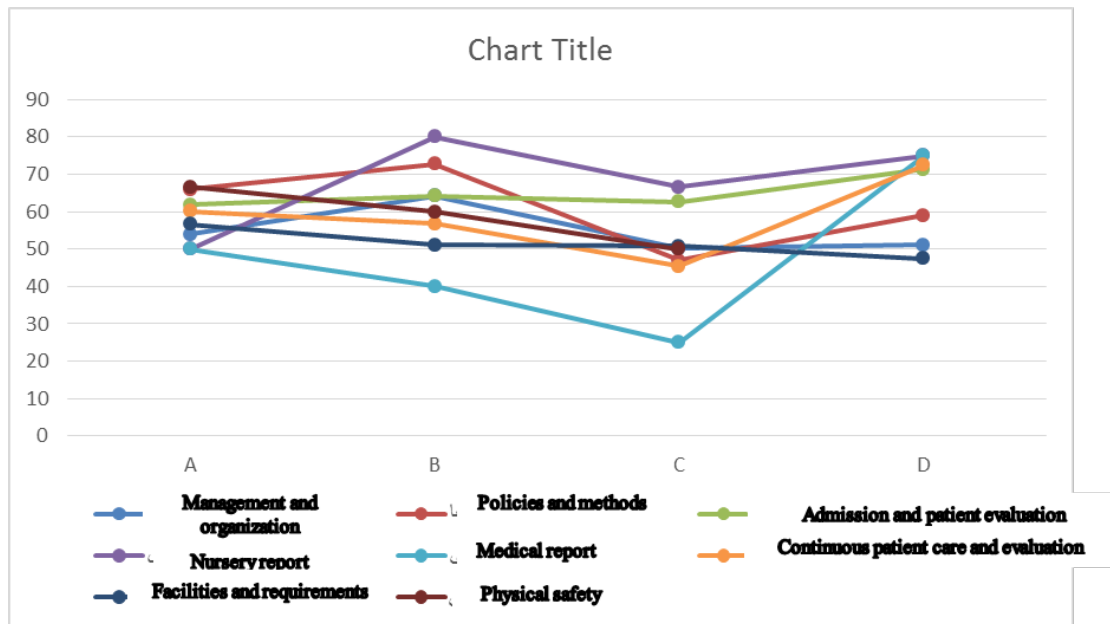


Curve 1. sum of obtained scores based on accreditation standards for ICS and CCU in Urmia educational-therapeutic centers (%)

As curve 1 illustrates, in comparison with ICUs, CCUs gained higher scores in terms of management and organization, policies and methods, nursery report, continuous patient care and physical safety. ICUs and CCUs were almost at the same level in terms of patient evaluation, medical report and facilities and requirements. Based on the results of this study, CCUs performed better than ICUs in terms of compliance with accreditation standards.

Discussion and conclusion:

Accreditation will lead to safe care and enhancement of patients’ satisfaction along with quality improvement. This model has been regarded as a global and international pattern for safety enhancement and will eventually result in improvements in organization performance which is the prerequisite for the major objective of health system: enhancement of society health [24].



Curve 2. comparison of 8 assessed aspects in 4 educational hospitals of Urmia University of Medical Science

As curve 2 shows, the mean of accreditation standards of 4 hospitals are approximately similar in some of the studied aspects. Most of the units were in medium level in terms of management and organization and in terms of human force management and training the personnel, some positive measures have been taken. The drawback of these criteria was incomplete documentation. In some units, the doctors are not available in full time periods while this is in contrary with the standards of this aspect.

For the aspect of policies and methods, all the units were excellent in terms of collecting accreditation documents; but unfortunately due to low awareness of staff about the policies and their correct method of implementation, lack of compliance with the policies during daily care, lack of in hand facilities of the units along with lack of consistency of observations with the related criterion and interviews with the patients, the score of this aspect was 46.9 in one of the hospitals, on general, these policies were only documented and in practice they are rather ignored. In the other words, ignorance of staffs toward policies and lack of sufficient management can be clearly seen and managers should take some serious measures in this regard. All the units have made significant actions in education and quality enhancement due to clinical dominance and accreditation. But as policies and their executional methods act as instruction for hospital activities, the compliance with international standards and their implementation should not be ignored.

World health organization (WHO) mentioned policies and implementation of precise and specific executional methods as effective factors in increasing the patients' safety [25]. Insufficient knowledge on problems and policies is among the reasons of errors in sections. Anousheh expressed knowledge deficiency in service presentation as one of the significant factors of errors in these units [26].

In terms of admission in the unit and patient evaluation, one of the hospitals gained the score of 71% which was the highest one and the lowest score was 61%. The scores in this section are in above-medium level.

For the aspect of nursery report, the highest and lowest scores were 80% and 50%, respectively. Two criteria were employed for investigation of this standard in which the second criteria is the replicate of the first one. These two criteria were not sufficient and further examinations are required.

Among the total scores of standards, medical report had the lowest score (40%). Most of reports were incomplete, difficult to read and the criteria were not considered in them. This is a warning sign for the senior managers of standard compliance in hospitals; the physicians have to be involved more in the process of accreditation. Not in this aspect, but in others, doctors have taken distance for this field and the highest portion of standard compliance burden is on nursery staff. Not in terms of documentation, but also in practice the doctors comply less with standards and they don't have enough knowledge on policies, criteria and their compliance. Interestingly, they don't find themselves responsible for that.

In terms of continuous patient care and evaluation, the highest and lowest scores were 72.5% and 45.4% obtained for documentation. In observations and interviews, lack of compliance with this criterion was evident. The total score of this aspect was 58.6% which was classified as medium score.

Study of Skimoto in Japan revealed that accreditation of hospitals could have a profound effect on institutionalization of activities and control of infections [27]. Ghadamgahi expressed that the majority of nurses do not have proper knowledge about how to control the hospital infections [28]. In this content, regarding the significant role of staffs (in all levels) in control of hospital infections, required education has to be provided to induce positive attitudes and benefit from the correct health behaviors.

In terms of facilities and requirements, the lowest and highest scores were 47.5% and 56%, respectively. The facilities of the units were not in proper condition and the total score of this aspect was 51.5%. From Anousheh's point of view, shortage of facilities and requirements is one of the major causes of errors in nursery care [26].

Physical safety declares that the patient care zone has to be controlled and surrounded. This aspect score was 56%. Some units were the pathway for other sections which is contrary with the criterion. It seems that investigation of only one criterion will not result in a complete conclusion about this aspect.

In terms of physical safety standards, the location of different units, their design and relationship between nursery stations and patients beds should facilitate the patient care. Having enough space, proper design, neat environment, pleasant air and equipment lay-out could have crucial impact on improvement of service presentation [20]. The majority of hospitals of Urmia University of Medical Science are old and the latest international standards can't be expected in these units; which is a reason for lack of enhancement in physical structure of the unit [20]. Traffics are not controlled in most units which may increase the contamination of environment. The educational nature of hospital has caused high sound pollution in these units. Interestingly, the entrance of the people without compliance with hygiene principals (special shoes, gown and ...) was not prevented during the study and no mention was even made from the personnel making them comply with the hygiene principles. In terms of area, most units has proper infrastructure but they lacked sufficient light.

As all the hospitals attained grade one degree in the evaluation made in the previous year, the sum of scores of intensive care units of all four hospitals of Urmia University of Medical Science was 57.9%; which is a low score regarding the total scores in standards. Lack of qualification in the obtained score from Ministry of health and medical education and difference between the assessments of ministry and international standards indicates the necessity to take measures to resolve these problems.

Rata conducted a study in India and declared that accreditation of hospitals would deeply influence increase of patients satisfaction and quality of therapeutic services, reduction of medical errors, respect to patient rights at the time of admission, control of access to patient's information, and increase of motivation among nurses to present the best service [29]. Although annual evaluation by ministry of health and medical education indicated an enhancement in performance of intensive care units [30], however, it is not sufficient. In addition to formal annual evaluations, it is better to conduct private evaluations about the manner of implementing standards and policies, increase of doctors', nurses' and other staffs' knowledge, supervision on precise recording of reports and involving the doctors in accreditation programs and their feedbacks among patients.

The conducted study also confirms the results of other previous researches. In his study, Moeini declared that health care standards of intensive care units of Arak hospitals are far away from the valid standards in this field [31], which is in line with the results of current research. Furthermore, Yavari expressed that the sum of scores obtained by ICUs of Shahid Beheshti Medical Science hospitals are far lower than the expected total score [20]. By evaluation of JIC accreditation in laboratories of a military hospital, Amerin said that the position of the mentioned hospital in the evaluation by ministry of health and medical education is not in complete agreement with the score obtained based on the JIC and the standards of JCI has to be considered more [23].

The studied units implemented the required measures in terms of documentation, providing the necessary documents such as charts, processes, policies, objectives and their implementation methods; however they were weak in terms of implementing and putting these ideas into action. Therefore, some programs have to be designed for better application of standards and policies and improvement of the conditions; in this way they can provide the health and treatment services in the best possible state. It is also recommended to conduct some investigations on the level of compliance with the accreditation standards in all intensive care units of the province and also in other provinces of country. Examination of the strong and weak points of accreditation-based evaluation programs in Iran and their comparison with JCI accreditation procedures would be also useful.

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