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Research Article

Determining the impact of nurses' knowledge regarding the compilation and implementation of guidelines of correct identification of patient in the incidence rate of medical errors reported by the patients in the hospitals of Shiraz medical sciences :2013

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Abstract

Background and objective: Medical errors are as one of the major challenges that the health systems of all countries are dealing with that.Failure to correctly identify the patients at health care centers, lead to wrong procedures and health care. Since the nurses provide the most health care services in hospitals, this study has been done with the purpose of determining nurses' knowledge level regarding compilation and implementation of the guide line of correct identification of patient in incidence rate of reported medical error by the patient in the hospitals of Shiraz medical sciences. **Materials and Methods:** This study is a descriptive- sectional study. The tools for data collection were 2 questioners, planning with 2 sections contains some questions about demographic and nurses' knowledge of correct identification of the patient and according to the studies and the purposes of the research, had face validity and in preliminary study by Cronbakh alphabet, the reliability coefficient was 0.796. Then 200 nurses and patient completed these questioners by using cluster sampling and interview method. To analyze the data, spssv.21 software and descriptive- inferential statistic methods were used .**Results:** All nurses aware of the guidelines and the correct identification of the patient's age and level of education knowledge towards developing and implementing the guidelines, there is no significant difference in the correct identification of the patient. Determining the impact of nurses' knowledge and implement guidelines to identify the correct patient-reported incidence of medical errors associated with authentication results showed that a significant relationship exists. This suggests that nurses' knowledge regarding the formulation and implementation of correct patient identification guidelines could well change in the variable incidence of medical errors reported by patients with authentication patients to explain the. Between knowledge, age and education of nurses, there is no significant correlation with the incidence of medical errors. **Conclusions:** The compilation and implementation and updating of guidelines of correct identification of patient, according to the changes, preferences and needs of patients, lead to reduce of the incidence of errors, improvement of health and treatment outcomes, and ultimately reduce of irrecoverable expenses of errors and improvement of quality of life and patient's satisfaction.
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Keywords: nurses' knowledge, compilation and implementation, guideline of correct identification of the patient, medical error, patient

Introduction

Any system inherently is disposed to errors and design a system that is free of errors is impossible (1).So, health management in the world, like the other executive systems in the world is not safe and perfect and will not be also. (2).Consequences arising from occurrence of an error is not only referring to patients but also doctors as the "second victims" of medical errors are affected too. Medical error is defined as not to take the correct action in a determined plan, global issue, costly and one of the factors causing death and injury to the patient.

Hence is focused seriously by society (4). The medical measures from simple injections to a complex surgery may be containing errors.

The error is defined as failure to complete a planned course of action so that the considered action does not perform according to plan or use of a wrong plan to achieve a specific objective (2).

Researches have shown that medical errors as eighth cause of death in America and annually 44 to 98 thousand patients lose their life due to medical errors (5) . Medical errors may occur during diagnosis a disease, prescribe medicines, surgery, use of medical equipment, care of hospitalized patients, interpretation of laboratory results and so on (6).

Failure to correctly identify patients at health care centers may lead to wrong procedures and health cares. Hence, in order to improve patient safety, correct identification of patients as primary objectives of the Joint Commission of America in 2003 is considered as one of requirements for accreditation of health centers. With this approach, Health Ministry Organization according to the existing standards, has proceed to enforce the general criteria related to correct identification of patients in form of the guidelines of the correct identification of patients (7).

The results of a study conducted by physicians in Lorestan was that: according to the importance of medical errors, it is necessary to teach it as a separate course during the education period for medical students and GPs require the continuity of related educations. (8) According to a research done by Eftekhari et al with the purpose of evaluating the conformity of correct identification of patient with the existing standards Preliminary results of this research showed that before taking any medical action should be ensured from correct identification of patient, thus communicating with the patient and his family is essential for the correct identification of the patient (9).

Kohpayezadeh et al in their study, considered medical errors as one of the most serious problems in health – treatment care and stated that serious errors should be explained to the patients and all the health team should be trained regarding medical errors (10).

Julaei et al also believe that improvement of working conditions has effect on reducing medical errors . Doshmanghir and Sarii in a reviewed study showed that unwelcome events and medical errors are seen in hospitals commonly and cause great harm to patients and society.So, identification and analysis of the causes and factors of these incidents have been considered effective in reducing them and their complications (11).

Shekel et al in their study stated that since guide lines are as a basic effort for improving health care, Therefore, development of clinical guidelines both in terms of methods, fields, and necessary measures in large scale such as: changes in the National Institutes of Health, Treatment and Clinical excellence in England were considered essential and effective (12).

The results of Danaher et al study also showed that although the elimination of the errors of correct identification of patient is difficult, but by practical initiative, it is possible to considerably develop the systems in the health complex environments (13).The aim of this study was to determine the impact of nurses' knowledge about the compilation and implementation of guidelines of correct identification of patient regarding the incidence rate of medical errors reported by patients.The results of this research lead to planning, innovation, providing better health services, high quality cares, meeting the needs and removing existence deficiencies in the guidelines of correct identification of patient as an essential and important pattern for improvement of health system; and duo to reduction of damage and exorbitance costs regarding the irreparable human and financial damages of medical errors, the patients trust more to the health system and medical team.

Materials and Methods

The current study is a descriptive – sectional study, done in two hospitals (Shahiid Faghihii and Namazi hospital) by Shiraz University of Medical Sciences.

This study was conducted in 2014. The research community consisted of employed nurses and hospitalized patients in the hospitals under study at the time of performing the research. The research sample was determined using Cochran formula.

The sample consisted of all employed nurses in the hospitalization wards before surgery, who were working rotating during at least one week in the ward.

Among the patients, the sample consisted of all admitted patients during one week in the hospitalization wards before surgery and they were admitted at least for one night in the hospital. The sample size for this study was

determined using Cochran formula and similar articles information from 189 people, and with considering the possibility of lack of accountability of interviewees, the sample size was determined for 200 people.

Data collection tools were 2 standard questionnaire made by scholars in accordance with correct identification of patient checklist.

In this study, the standard questions regarding guideline of correct identification of patient according to the used guidelines in hospitals of Shiraz University of Medical Sciences were included in the tool.

The questionnaires were designed according to an overview on studies and research objectives and had face validity and in preliminary study had 0.796 stability coefficient. Analysis of the data research, at the end was performed by using spss software version 21 and data were extracted. (P <0/05)

Results

The results of data collected from 200 nurses and patients in this study showed that most patients were selected sample of women with 0.53 percent and 0.47 percent are men. Finally, the selected community nurses, Maximum of 0.79% of the total sample of 79 women surveyed 100 people and society; and men are 0.21 percent of the samples included.

In this study, most patients were selected sample of married population 0.78 percent and 0.22 percent is single. Selected from among the nurses showed, most of whom were married, with 77% of the total sample of 100 people surveyed, namely 0.77 and 0.23 percent of the samples included single community. (Table 1)

The results of this study showed that 100% of the nurses were fully aware of compilation and implementation of the guide line of correct identification of the patient regarding the incidence rate of medical errors reported by the patient and importance of the matter was approved and confirmed by managers of clinical office and quality improvement.

The relationship between age and education of nurses and their knowledge about the development and implementation of guidelines for correct identification of the patient. Comparison of the average test results showed no significant relationship, meaning that each component age and educational level, regardless of the type of education would have the same response (Sig>

0.05). So, there is not any significant relation between age, education level and awareness of the compilation and implementation of the guide line of correct identification of hospitalized patient.

In relation to the effect of nurses' knowledge about the development and implementation of guidelines for correct identification of the patient the incidence of medical errors reported by the patient associated with patient identification results showed that a significant relationship exists.

That is, any age and level of education, regardless of education, it would have the same response (Sig> 0.05).

According to Table 2 Factors that nurses' knowledge about the formulation and implementation of guidelines for correct identification of patients at risk of medical errors reported by the patient is associated with the identification of patients influence. But the impact is not significant (Sig> 0.05, = -0.068).

Studies have also examined the relationship between age and incidence of medical errors reported by nurses and patients related to patient identification and test out the hypothesis test results showed that there is a negative correlation. But this effect was not significant (Sig> 0.05, = 0.027) and (Sig> 0.05, = -0.13).

Also the relationship between age and education of nurses and the incidence of medical errors reported by patients admitted with authentication using hypothesis testing, the test results mean that there is a negative relationship. But this effect was not significant (Sig> 0.05, = 0.027) and (Sig> 0.05, = -0.13). So, there is no significant relation between knowledge, age and education level of nurses, with the incidence rate of medical errors.

Discussion

In the current study the results showed that awareness level of the nurses about completion and implementation of the guide line of correct identification of patient regarding incidence rate of reported medical errors by the patient is 100 percent. And all the nurses announced that they are fully aware of the provisions of the guidelines.

Since the improvement of patient safety and correct identification of patients are as the basic objectives of the Joint Commission in 2003, they were considered as requirements of accreditation of Health Care Centers

Table 1: Distribution of the sample by gender and marital status

Patient				Nurse					
women		men		women		men		Sex	Distribution
Frequency	numb	Frequency	numb	Frequency	numb	Frequency	numb		
0.53	53	0.47	47	0.79	79	0.21	21		
Married		Single		Married		Single		Marriage	Distribution
0.78	78	0.22	22	0.77	77	0.23	23		

Table 2: Table of regression coefficients

Significant	t	Standardized coefficients	Non-standardized coefficients.		model
		Ratio ( )	Standard error	B	
0.00	11.66		0.093	1.09	**Constant**
0.50	-0.676	-0.068	0.092	-0.062	**Incidence of medical errors reported by the patient**

So, with this approach, Health Ministry organization according to the existing standards, has proceeded to enforce the general criteria related to correct identification of patients in form of the guidelines of correct identification of the patient (7).Any similar study regarding nurses' knowledge level of the guidelines was not founded yet, but the results of the current study can be considered consistent with other studies (9,13-16).Also, there is a negative relationship between age of nurses and incidence rate of medical errors reported by patients .

But this effect is not significant (Sig > 0.05,   = -0.02).The results of the current study are consistent with Mahasel study. As in the field of diagnostic psychology and affecting human factors, most of medical errors are because of weakness of the systems that person worked at it and was not aware of the administrative provisions and there is not significant relationship between age, gender and working conditions with level of this knowledge (17)Also, there is no significant difference between level of education and the incidence of medical errors and these results are not consistent with the results of other studies; as out of respect to the education level

of persons, methodology of processes should be strengthened by the persons who have deal with them; and development method of clinical guidelines in terms of methods, field and necessary actions should be considered in scale of great guideline (12,15) but it is not compatible with Rahimi et al study; as age, sex and workload showed significant relation with reported medical errors (18)

The results related to the of nurses' knowledge regarding compilation and implementation of guidelines of correct identification of hospitalized patients in hospital showed that, there is no significant relationship between the incidence of medical errors reported by patients with authentication.

The results of current study also is confirmed according to the results of previous studies as Eftekhari et al stated that the medical team and health services providers before any remedial action should be informed of the correct identity of patient; so communicate with patient and his family for correct identification is necessary and just be aware of the guidelines is necessary but not sufficient.

Also, error in determining the identification of patient may lead to medical errors such as: injection, wrong experiments, wrong personal procedures, and delivery of baby to the other families (9).

Finally, compilation and implementation of the guidelines of correct identification of the patient before the surgery, is effective in the incidence of medical errors reported by the patient, related to identify patients before surgery.But this effect is not significant and there was no significant difference. a review on studies shows that most medical errors are caused by weaknesses in the systems to which the individual has worked in;in other words, most of these errors are caused by failures in the design of processes, tasks, training and working conditions that increase the probability of incidence of error (17,19).

Shamsaei et al findings are consistent with the results of recent research findings and coworkers are such that no significant relationship between sex and age groups, and not committing medical errors (20).

The findings of this study showed that the incidence of medical errors reported by school nurses and patients related to authentication, there is no significant difference in hospital patients. The results of this study are consistent with findings loom and colleagues so that the occurrence of medical errors by nurses working conditions and education, there was no statistically significant association (11). The study results showed Minogue as the education and health service providers, there is no significant correlation between the incidences of medical errors (21).

Conclusions

The results of this study showed that all the nurses are fully aware of compilation and implementation of guide line of correct identification of patient regarding incidence rate of medical error reported by the patient; and this is as a result of much effort of clinical management team and the member of hospital quality improvement office.

In the current study, the results showed that according to the importance of clinical guide lines especially the guide lines of correct identification of the patient, emphasis on importance and necessity of getting information about the provisions of it, help the health and treatment system to meet the goals in better way, that is providing better and high quality services; and

prevent the exorbitance costs that is because of incidence rate of medical error during providing the services.

So, for creating appropriate space for training of health team staffs in different levels, and also participation and better learning of participants in training sessions, In addition to creating a sense of competition in learning, according to the level of each staff, an appropriate teacher at the same level should be considered so that by creating mutually satisfactory relationship, help his partner for learning, improvement and better update of clinical guidelines in order to take step to provide quality health services for attracting customer satisfaction.

Also managers by meetings, surveys and evaluation of successes and challenges of the affairs regarding to the hospital in the field of compilation and implementation of clinical guidelines, should get the appropriate strategies in order to provide better health services and further decreases in the incidence rate of error and create appropriate space for creativity of health team members in various fields of improving work processes and providing health services by holding various training courses, according to the findings of updated modern medical and health care sciences.

Proposals

Update and improvement of the knowledge and experience of doctors and nurses as the main members of the health services provider, create the favorable conditions for them to make better decisions in order to provide proper treatment according to the correct diagnosis.

With an emphasis on importance of the guide lines of correct identification of patient in providing the health services, it is possible to reduce the risks that may cause irreparable damage to lives and property and consequently the exorbitant expensive for the treatment and health system and help managers to achieve how better the objectives of hospital according to the world advanced model; and reduce extra costs in hospital and thus promote the organization.

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