Accreditation of Patient Family Education (PFE) in the Teaching Hospitals of Tehran University of Medical Sciences from the Nurses view

Dr. Fereshteh Farzianpour, Associate professor
(Corresponding author)

Department of Health Management and Economics,
School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

farzianp@sina.tums.ac.ir
Box 14155- 6446 Tehran, Iran

Shadi Hosseini ,
MBA, Department of Management, University of Tehran Kish International Campuse, Iran
shadi_un@yahoo.com
09365781287 Tehran, Iran

Saminea Mortezagholi, BSc Health care management, department of
Health care management, Tehran University of Medical Sciences, Tehran, Iran.

Kobra. Bamdad Mehrbany: MSc of Immunology
Instructor of department of Immunology
, school of Medicine, Tehran university of Medical Sciences, Tehran, Iran

postal code: 1417613151,
Telephone: +982164053235, fax: +982166419536,
Email: bamdadma@sina.tums.ac.ir

Abstract

This study has been conducted with the aim of validating international standards of (PFE) based on Joint Commission International Accreditation Standards for Hospitals (JCI) in the selected hospitals of Tehran University of Medical Sciences from nurses’ view. This study as a survey research which is a type of descriptive-analytical research was conducted in a six-month time duration from January 2011 until June 2011. PFE includes 7 standards and 39 measurable elements. For data collection two questionnaires were used which consisted of PEF standards. The reliability was measured by Cronbach’s alpha and Intra Class Correlation (ICC) method. Cronbach’s alpha was 0.875 and 0.954 respectively for the first and the second questionnaires. The required sample size was selected 258
individuals which was proportionate with the number of nurses employed in the studied hospitals. Analytical statistics including one-way ANOVA and Scheffe multiple-comparison were used for determining differences and relations between the variables. The final implementation of PFE international standards in the selected hospitals showed that among the 7 standards, from the field of the standard PEF.4 (Patient education helps them to respond to their health needs), the standard PEF.4.4 (nutritional guidelines) was completely applicable in 30.2% of the cases. Furthermore, 8.1% of the standard field of PEF.2 (Educational needs of each patient is assessed and recorded in his file) was applicable. The standards PEF.5 and PEF.6 were respectively the most and the list applicable standards in the selected hospitals of Tehran University of Medical Sciences.

**Keywords:** Accreditation, Hospitals, Patient Family Education, Nurses

1. **Introduction**

In every situation, a human tried to increase his ability for adapting with ne situation by learning especial expertise and knowledge [1]. Being ill and hospitalized is a condition when need to help and education increases; therefore, the concept of patient education has emerged which is a key role of nurses in providing healthcare and therapeutic services [2]. Nurses, constituting more than 70% of healthcare members have a valuable role in patient education [3]. Patient and family education is considered as an important role and one of the quality standards of nursing care; all patients have the right to be educated to their healthcare, disease prevention and health promotion [4]. Most of patients need to learn about their new situation, disease prognosis, treatment method, its risk and benefits [4,5]. Learning healthcare leads to increased patient’s independence, improvement of self-care, assurance about care, relief of patient’s anxiety, reduced incidence of disease complications, hospitalization and costs [4,6]. The aim of education as a dynamic constant process and one of the essential needs of the human being is to increase patient's independence for taking care of himself, improve quality of life and reduce re-hospitalization [4,7]. Several factors necessitate patients education: disease prevention, patient improvement and reducing his pain, coping with chronic diseases and disabilities, shortening disease duration, decreasing recurrences, improving quality of life, assurance about continuation of care, reducing patient's anxiety, decreasing incidence of disease complications, increased participation in healthcare and etc. are of these factors [4,8-9]. Many authors believe that nurses are the best options for educating patients since they spend a long time and have a close relation with them [9-10]. In the United States of America, approximately 69-100 million dollars is spent annually for therapeutic problems due to not presenting patient education [10]. Each dollar spent for patient education saves about 3-4 dollars [9-11]. Although patient education is of healthcare priorities and standards, the performed studies and the researchers' clinical experiences indicate lack of adequate patient education by nurses [10,12]. Knowing the inhibitory and facilitating factors of patient education influences nurses' ability to conduct it and improve its quality [13]. Limited time and staff, inadequate resources and inappropriate environment, lack of nurses' knowledge and not paying attention to this duty, age, economic state and patients’ anxiety are of inhibitory factors [14-15]. In our country, there are different studies that determine the state of patient education. In a study by Vafaei et al in the surgery wards of the Tajrish hospital Shahid Beheshti University of Medical Sciences, it was shown that the nurses spent only 8.2 minutes for patient education in the morning shift which is approximately 405 minutes [16-17].
Based on the results of the study by Moezzi et al in the emergency wards of the hospitals of Tehran University of Medical Sciences, only 37.1% of the patients were satisfied with the educations presented by the nurses[16]. Nurses, like other professional groups, need motivation for their work; as a result, patient education as a very professional activity needs a strong motivation. A human's activities and behaviors are formed based on a motivation and no activity is performed without motivation[16,17]. Countries around the world have considered the concept of quality in their healthcare system from years ago because today just providing healthcare services is not the only concern but patients demand high quality healthcare services [18-20]. As a result, this study has been conducted with the aim of validating international standards of patient family education (PFE) based on Joint Commission International Accreditation Standards for Hospitals (JCI) in the selected hospitals of Tehran University of Medical Sciences from nurses' view in 2011.

2. Methods

This study as a survey research which is a type of descriptive-analytical research was conducted in a six-month time duration from January 2011 until June 2011. The study population was all of the active nurses and head-nurses in these hospitals. The needed sample size which was 258 individuals was calculated by the following formula proportionate with the number of the patients employed in the selected hospitals of Tehran University of Medical Sciences. The confidence interval, standard deviation and accuracy of the study were respectively considered 2, 7 and 0.09.

\[
n = \frac{(Z_{1-\alpha} + Z_{1-\beta})^2 \times \sigma^2}{d^2}
\]

PFE standards included 7 standard fields and 39 elements.

Two questionnaires were used for data collection both containing PFE standard (19).

1) Standard 1: Hospital provides educational program to attract patient's and family's participation in decision making and healthcare process (3 measurable elements).

2) Standard 2: Educational needs of each patient is assessed and recorded in his file (8 measurable elements).

3) Standard 3: Patients' and families' ability and desire for learning is evaluated (6 measurable elements).

4) Standard 4: patient education helps them to respond to their health needs (5 measurable elements).

5) Standard 5: PEF is for providing an appropriate healthcare including safe use of drugs, safe use of equipment, possibility of interaction between drugs and food, nutritional guidelines, pain management and Rehabilitation methods (6 measurable elements).

6) Standard 6: Educational methods are performed by considering values, patients' and families' priorities and proper interaction between patient, family and staffs (6 measurable elements).
7) Standard 7: Necessary coordination about education issues is performed between different medical groups (5 measurable elements).

In the first questionnaire which includes the standards in each field, scoring is as follow:

- standards are completely implemented (3 scores),
- standards are partially implemented (2 scores),
- the option standards are not implemented (1 score).

The reliability was measured by Cronbach's alpha and Intra Class Correlation (ICC) method. Cronbach's alpha was 0.875 for the first questionnaire and 0.954 for the second questionnaire.

After collecting the questionnaires and ensuring about implementation of all standards, the second questionnaire was designed consisting of 39 three-option (yes, no and partially) questionnaire (measurable elements). After calculating its reliability and validity, 358 questionnaires were distributed. Scoring in the second questionnaire was as follow: yes 3 scores, partially 2 scores and no 1 score. Therefore, the maximum and minimum scores were respectively 117 and 39. In order to evaluate hospitals and to compare with other studies, scores of each field were classified according to the minimum and maximum obtained scores. Groups 1, 2 and 3 were respectively indicative of weak, intermediate and good implementation of the measurable elements. The main goal of the present study was to estimate the mean scores of each field of PFE; however, distance estimation method was used to find the mean score for each field. Analytical statistics including one-way ANOVA and Scheffe multiple-comparison was used for determining differences and relations between the variables. Data analysis was performed by ANOVA tests using version 16 of SPSS software. Figures were used for exhibiting analytical information. Descriptive information was exhibited by tables of frequencies, distribution indices and drawing diagrams using Excel software.

3. Ethical considerations

- Obtaining a referral in order to enter to the selected hospitals
- entering to the hospital and collecting data in coordination with
- the hospital authorities
- protect the confidentiality of data
- Giving adequate time to the participants for completing the questionnaire
- and preventing from harassing them while working
- Regarding trusteeship and avoiding to apply any bias and personal opinion in
- various stages of research
4. Results

Among the 16 hospitals, there were 4 general hospitals and 12 specialized hospitals; the statistical analysis showed that the type of hospital has no effect on any of the PFE fields to be implemented (P-value>0.05). regarding bed number, 4 hospitals had less than 109 beds, 7 hospitals between 110 and 245 beds and 5 hospitals more than 246 beds; however, bed number did not influence any of PFE fields.

**Standard 1: Hospital provides educational program to attract patient’s and family’s participation in decision making and healthcare process.**

According to table 1, the standards of this field were applicable in the hospitals of Tehran University of Medical Sciences from the view of 16 nurses (6.2%) while 136 nurses (52.7%) believed that these standards were partially applicable.

**Standard 2: Educational needs of each patient is assessed and recorded in his file.**

Twenty one nurses (8.1%) believed that these standards were applicable in the studied hospitals and 110 nurses (42.6%) indicated that these standards were partially applicable. In this field the list applicable standard was the standard 2-1.

**Standard 3: Patients' and families' ability and desire for learning is evaluated.**

The standards of this field were applicable from the view of 1 nurses (5.4%) but 129 nurses (50%) believed that these standards were partially applicable. The list applicable standard in this field (1 nurse (1.7%)) was the standard 3-2 (Organization identifies social resources that support the continuous health improvement and provide educates about disease prevention connects with them).

**Standard 4: patient education helps them to respond to their health needs.**

The standards of this field were applicable from the view of 37 nurses (14.3%) and 145 nurses (56.2%) believed that these standards were partially applicable. The list applicable standards in this field were the standards 4-5 (if needed, patients and families are educated about pain management) and 4-6 (if needed, patients and families are educated about rehabilitation methods) (4 nurses (6.7%)).

**Standard 5: PEF is for providing an appropriate healthcare including safe use of drugs, safe use of equipment, possibility of interaction between drugs and food, nutritional guidelines, pain management and Rehabilitation methods.**

The standards of the field 5 were applicable from the view of 43 nurses (16.7%) and 147 nurses (57%) indicated that these standards were partially applicable.
The list applicable standard in this field was the standard 5-6 (the patients will be informed about healthcare, treatment and way of participating in healthcare decision making how much they desire).

**Standard 6: Educational methods are performed by considering values, patients' and families' priorities and proper interaction between patient, family and staffs.**

Thirteen nurses (5%) believed that these standards were applicable while 126 nurses (48.8%) indicated that they were partially applicable. The list applicable standards in this field were the standards 6-1 (PFE is jointly provided if necessary) and 6-5 (patient, his family or anyone who makes decisions instead of him are respectively discussed about the risks and benefits of surgery and anesthesia and alternative methods).

**Standard 7: Necessary coordination about education issues is performed between different medical groups.**

The standards of this field were applicable from the view of 32 nurses (12.4%) but 129 nurses (50%) believed that these standards were partially applicable. In this field, all of the standards especially the standard 7-2 (in order to perform this task, individuals who provide education, are informed about the issues) had the highest score (table 1).

As a result, 48 nurses have given score above 78 to PFE standards. In the other word, about one fifth of the nurses participating in this study have given positive response to all of the PFE standards in the studied hospitals (fig 1).

Table 2 showed standard deviation, standard F, P-value and the results of ANOVA for the scores of each field regarding each of the different factors. Furthermore, Scheffe multiple-comparison was used for comparing the scores of each of the fields. The results of Scheffe multiple-comparison show that the mean scores of the standards of the fields PFE1, PFE3 and PFE7 in the general hospitals were significantly higher than the specialized hospitals (P=0.029, P=0.027 and P=0.007, respectively). The mean scores of the standards of the field PFE2 in the general hospitals was significantly different from the specialized hospitals (P<0.05); however, the mean scores of the standards of the fields PFE4, PFE5 and PFE6 in the general hospitals and the specialized hospital were not significantly different (P>0.05).

**5. Discussion**

Health education consists of all educational activities related to patient including therapeutic education, health education and clinical health improvement that help patient to make informed decision about disease and learning self-care skills[20].

Hospital quality improvement, is constant a process aiming to evaluate the services provided to patients. Provided services are assessed in an appropriate program of quality improvement based on common and accepted standards of professional care. Care improvement is the product of quality improvement[21].

Regarding accreditation of the studied hospitals, they can be considered the level of international standards by overcoming the inadequacies. In the part of PFE standards according to JCI standards, these hospitals require modern policies with new operational programs.
Since there are different approaches for quality improvement including process improvement, quality assurance, re-engineering and collaborative management [22, 23]. For implementing PFE standards an appropriate approach can be used with regard to facilities and condition of each hospital. Danini et al (2008) believed that patients should use the services they are satisfied with along with benefiting from right services [4,10]. One of the factors helping patients to benefit from right services is to observe PFE international standards; based on these standards, hospital care users are ensured and satisfied with the quality of received services [4, 10]. In the present study, the applicability of 7 fields and 39 standards of PFE standards were evaluated in the hospitals of Tehran University of Medical Sciences. Approximately all of PFE1 standards were implemented in the studied hospitals. Moreover, one fifth of the participated nurses gave positive response to all of PFE2 standards in the evaluated hospitals. Besides, one eighth of PFE3 standards were applicable in these hospitals. All standards of PFE4, PFE5 and PFE6 were implemented in the studied hospitals. According to the results, the list and the most applicable standards were PFE6 and PFE5 standards, respectively. PFE standards were applicable in the hospitals of Tehran University of Medical Sciences from the view of 258 nurses. All of the previous studies evaluated hospitals from the point of observing PFE international standards and none have assessed their applicability. Since these standards are international, researchers believe that it is better to first evaluate the applicability of these standards in the hospitals of Tehran University of Medical Sciences and then to plan for their implementation and establishment.

Patients' health is influenced by different healthcare processes and the issue of measuring quality mostly emphasis on the importance of organization and cooperation within healthcare organizations. Organization is an important factor for obtaining good results and high quality care [9].

Amirifar et al (2011) indicated that 31.6% of the standards related to quality improvement and patient's safety were completely observed in the emergency ward of Imam Khomeini Hospital, 44.9% were partially observed and 23.5% were not observed, these results are consistent with our findings.

**Conclusion**

From the view of most of the nurses, PFE standards are fairly applicable in the hospitals of Tehran University of Medical Sciences; however, for using these international standards, the hospitals should perform more efforts.

**Study strengths**

PFE international standards have been evaluated in the studied hospitals for the first time.

The large sample size (258 individuals) led the findings to be closer to reality.

**Study limitations**

The staffs inadequate information and knowledge about PFE standards

There are not many national and international studies about PFE; therefore the author had some limitations for comparing the results with other studies.

Lack of a standard questionnaire
Practical suggestions

According to the findings of the present and previous studies, it seems essential to perform some tasks in order to implement, establish and improve PFE standards including the following:

Educating nursing staffs about PFE standards and their privileges

Active participation of nurses in standardization process

Nurses' and managers' attention to the dynamics of the standards

Developing a continuous clinical audit system

About the management of processes in the studied hospitals, it is better to consider the view of the staffs and the patients for reviewing and modifying the processes.

Acknowledgement

The authors would like to thank the Nurses of hospitals of Tehran University of Medical Sciences Who assisted us greatly in preparing this study.

Conflict of interest: None declared.

Table 1 - Distribution of relative frequency PFE operational standards in hospitals of Tehran University of Medical Sciences from the Nurses' perspectives in 2011

<table>
<thead>
<tr>
<th>Standards</th>
<th>Is fully Implemented?</th>
<th>Rather it is performed</th>
<th>Not applicable</th>
<th>No response.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Patient And family</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>PFE.1</td>
<td>16(6.2)</td>
<td>136(52.7)</td>
<td>104(40.3)</td>
<td>2(0.8)</td>
<td>258(100)</td>
</tr>
<tr>
<td>PFE.2</td>
<td>21(8.1)</td>
<td>110(42.6)</td>
<td>125(48.4)</td>
<td>2(8)</td>
<td>258(100)</td>
</tr>
<tr>
<td>PFE.3</td>
<td>14(5.4)</td>
<td>129(42.6)</td>
<td>112(43.4)</td>
<td>3(1.2)</td>
<td>258(100)</td>
</tr>
<tr>
<td>PFE.4</td>
<td>37(14.30)</td>
<td>145(50)</td>
<td>71(27.5)</td>
<td>5(1.9)</td>
<td>258(100)</td>
</tr>
<tr>
<td>PFE.5</td>
<td>43(16.7)</td>
<td>147(56.2)</td>
<td>46(17.8)</td>
<td>22(8.5)</td>
<td>258(100)</td>
</tr>
<tr>
<td>PFE.6</td>
<td>13(5)</td>
<td>126(48.8)</td>
<td>113(43.8)</td>
<td>6(2.3)</td>
<td>258(100)</td>
</tr>
<tr>
<td>PFE.7</td>
<td>32(12.4)</td>
<td>129(50)</td>
<td>93(36)</td>
<td>3(1.2)</td>
<td>258(100)</td>
</tr>
</tbody>
</table>
Table 2: The results of analysis of variance and multiple comparison schieffe areas in the scores of hospitals in 2011

<table>
<thead>
<tr>
<th>Domain</th>
<th>Teaching Hospitals</th>
<th>Mean ± SD</th>
<th>Teaching Hospitals</th>
<th>S D</th>
<th>F</th>
<th>P -value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFE.1</td>
<td>General</td>
<td>4.58(1.49)</td>
<td>General</td>
<td>-0.78</td>
<td>9.68</td>
<td>0.029</td>
</tr>
<tr>
<td></td>
<td>Specialized1</td>
<td>5.36(2.03)</td>
<td>Specialized</td>
<td>-0.30</td>
<td>0.540</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specialized2</td>
<td>4.28(1.55)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFE.2</td>
<td>General</td>
<td>8.77(2.84)</td>
<td>General</td>
<td>0.78</td>
<td>9.68</td>
<td>0.029</td>
</tr>
<tr>
<td></td>
<td>Specialized1</td>
<td>8.06(2.65)</td>
<td>Specialized</td>
<td>1.08</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Specialized2</td>
<td>8.16(2.93)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFE.3</td>
<td>General</td>
<td>13.05(3.72)</td>
<td>General</td>
<td>1.63</td>
<td>8.28</td>
<td>0.027</td>
</tr>
<tr>
<td></td>
<td>Specialized1</td>
<td>15.65(3.82)</td>
<td>Specialized</td>
<td>-1</td>
<td></td>
<td>0.190</td>
</tr>
<tr>
<td></td>
<td>Specialized2</td>
<td>14.68(3.78)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFE.4</td>
<td>General</td>
<td>7.94(2.63)</td>
<td>General</td>
<td>0.20</td>
<td>1.25</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>Specialized1</td>
<td>8.77(2.03)</td>
<td>Specialized</td>
<td>0.22</td>
<td></td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Specialized2</td>
<td>8.11(2.40)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFE.5</td>
<td>General</td>
<td>11.37(2.85)</td>
<td>General</td>
<td>-0.02</td>
<td>1.25</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>Specialized1</td>
<td>12.83(3.49)</td>
<td>Specialized</td>
<td>0.02</td>
<td></td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Specialized2</td>
<td>12.87(3.78)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>10.27(2.94)</td>
<td>General</td>
<td>-0.22</td>
<td>1.25</td>
<td>0.23</td>
</tr>
<tr>
<td>PFE.6</td>
<td>Specialized1</td>
<td>11.53(2.95)</td>
<td>Specialized</td>
<td>0.0.2</td>
<td></td>
<td>0.98</td>
</tr>
</tbody>
</table>
Specialized2 10.59(2.73) 
PFE.7 General 9.05(2.57) General -0.34 2.59 0.007 
Specialized1 9.65(2.44) Specialized 0.14 0.35 
Specialized2 9.06(2.38) 

Specialized hospitals 1=109-245 beds
Specialized hospitals 2= more than 246 beds

References


10- Farzianpour F, Arab M, Amoozagar S , R.Fouroshan Ai and Rashidian A et al. 


19- TEACHING QUALITY IMPROVEMENT TO CLINICIANS©2007 American Medical Association. All rights reserved. (Reprinted) JAMA, September 5. 2007; 298(9): 1037.


22- McGreevey M. Patients as partners: How to involve patients and families in their own care. Oakbrook Terrace, IL: Joint Commission Resources. 2006.