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Assessment of Patient Safety Friendly Hospital Initiative in Three Hospitals Affiliated to Tehran University of Medical Sciences

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ABSTRACT

Introduction: The aim of this study was to assess the status of patient safety in three hospitals, affiliated to Tehran University of Medical Sciences, based on the critical standards of Patient Safety Friendly Hospital Initiative (PSFHI).

Materials and Methods: In this cross-sectional study, conducted in 2014, we used PSFHI assessment tool to evaluate the status of patient safety in three hospitals, affiliated to Tehran University of Medical Sciences; these general referral hospitals were selected purposefully. PSFHI assessment tool is comprised of 140 patient safety standards in five domains, categorized in 24 sub-domains. The five major domains include leadership and management, patient and public involvement, safe evidence-based clinical practices, safe environment, and lifelong learning.

Results: All three hospitals met more than 70% of the critical standards. The highest score in critical standards (> 80%) was related to the domain of leadership and management in all hospitals. The average score in the domain of safe evidence-based clinical practices was 70% in the studied hospitals. Finally, all the hospitals met 50% of the critical standards in the domains of patient and public involvement and safe environment.

Conclusion: Based on the findings, PSFHI is a suitable program for meeting patient safety goals. The selected hospitals in this survey all had a high managerial commitment to patient safety; therefore, they could obtain high scores on critical standards.

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Introduction

Unsafe medical care, as a pervasive problem, imposes a substantial economic burden on healthcare systems due to the high rates of morbidity and mortality, which can be prevented via suitable interventions (1). In addition to morbidity and mortality associated with medical errors, unsafe medical care can directly affect the profitability of hospitals and increase the costs imposed on healthcare systems (2, 3).

Unsafe medical practice can lead to higher mortality rates, compared to threatening events such as motor vehicle accidents or cancer (4). Therefore, issues related to patient safety have become important among healthcare managers and policymakers (5, 6). Since the initiation of Patient Safety Program by World Health Organization (WHO), more than 140 countries have started to address unsafe care provision and the potential harms to individuals (7).

Many countries have prioritized patient safety in their healthcare agenda (8). In addition, policymakers and governors are persuading healthcare organizations to implement several safe practices and avoid adverse preventable events (9). Also, many countries have started to set accreditations and regulations to highlight the importance of patient safety improvement (10, 11).

Despite all the efforts for improving patient safety in different countries, many people throughout the world suffer from the induced damages. Therefore, various measures need to be taken to reach the objectives of safe care (12, 13). Even the National Health Service in England, which is highly committed to healthcare

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quality and safety, needs to improve patient safety and quality of care (14, 15).

Evidence shows that progress in eradicating medical errors does not match the invested financial resources and efforts (9). The major reason behind the failure of healthcare systems regarding patient safety improvement is the absence of systematic assessment and monitoring (16).

Therefore, in major healthcare systems, a wide range of actions should be taken to recognize and handle the potential risks (8).Various studies have assessed patient safety-related issues in developed countries (16-23), whereas a limited number of studies have been conducted in developing countries (24-28). To address the problems associated with patient safety, the WHO Eastern Mediterranean Regional Office (EMRO) started the Patient Safety Friendly Hospital Initiative (PSFHI) in 2007.

In general, PSFHI is a program designed to assess the commitment of hospitals to patient safety.

In Iran, PSFHI was first launched in 2011. In the first phase, the program was implemented in ten selected hospitals as a pilot program.

In the second phase, many other hospitals added the program to their agenda.

Tehran University of Medical Sciences (TUMS), which is one of the most important medical universities in the country, implemented the program in an affiliated hospital in the first phase. In the second phase, safety issues were highlighted through implementing PSFHI in the majority of affiliated hospitals.

In this study, we aimed to evaluate the status of PSFHI in three hospitals, affiliated to TUMS, and to assess the status of patient safety in these hospitals, based on PSFHI critical standards.

Materials and Methods

In this cross-sectional study, which was conducted in 2014, we used PSFHI assessment tool to evaluate the status of patient safety in the selected hospitals. PSFHI assessment tool is comprised of 140 patient safety standards in five domains, categorized in 24 sub-domains.

The five domains include leadership and management, patient and public involvement, safe evidence-based clinical practices, safe environment, and lifelong learning. The standards are categorized as critical (n=20), core (n=90) and developmental (n=30).

The details of 140 standards are presented in Table 1.

Critical standards are the mandatory standards to which hospitals need to comply in order to be enrolled in PSFHI. Core standards are an essential set of standards to which hospitals should adhere to ensure patient safety.

It is not mandatory to meet 100% of the core standards in order for a hospital to be registered in PSFHI; however, the percentage of fulfilled standards determines the level of patient safety attained. Finally, developmental standards are the requirements for a hospital to enhance the level of safe care (29).

A team comprised of patient safety experts from TUMS and Ministry of Health applied the assessment tool by reviewing the documents related to each standard, interviewing the key respondents (including the hospital staff and patients), and directly observing the process of care provision during patient safety tours.

In this paper, we assessed the critical standards in three hospitals, affiliated to TUMS (Table 2). All these general and referral hospitals were selected purposefully. The hospitals were named A, B, and C to maintain the confidentiality of the data. Hospitals A, B, and C are equipped with 113, 194, and 520 beds, respectively.

Table1: Patient Safety Friendly Hospital Initiative (PSFHI) standards

Domains	Standards			Total
	Critical	Core	Developmental	
A. Leadership and management	9	20	7	36
B. Patient and public involvement	2	16	10	28
C. Safe evidence-based clinical practices	7	29	8	44
D. Safe environment	2	19	0	21
E. Lifelong learning	0	6	5	11
Total score	20	90	30	140

Table2: Critical standards for enrollment in Patient Safety Friendly Hospital Initiative (PSFHI)

Critical standards	Score		
	Not met (0)	Partially met (0.5)	Fully met (1)
A.1.1.1. The hospital has patient safety as a strategic priority. This strategy is implemented through a detailed action plan.			
A.1.1.2. The hospital has designated a senior staff member with a sense of responsibility, accountability, and authority for patient safety.			
A.1.1.3. The leadership conducts regular patient safety leadership walk-rounds to promote patient safety.			
A.2.1.1. A designated person coordinates patient safety and risk management activities to promote safety culture, identify the risks in the system, and act on patient safety improvement opportunities.			
A.2.1.2. The hospital conducts regular morbidity and mortality meetings (at least every month).			
A.4.1.1. The hospital ensures availability of essential equipments.			
A.4.1.2. The hospital ensures that all reusable medical devices are properly decontaminated prior to use.			
A.4.1.3. The hospital has sufficient supplies to ensure prompt decontamination and sterilization.			
A.5.1.1. Qualified clinical staff (both permanent and temporary) are registered to practice by an appropriate committee.			
B.2.1.1. Before any invasive procedures, consent should be signed by patients. The patients should be informed of all the risks, benefits, and potential side-effects of the procedures in advance.			
B.3.1.1. All patients are identified and verified with at least two identifiers including the full name and date of birth (room number is not included) whenever a patient undergoes a procedure (e.g., laboratory, diagnostic, or therapeutic procedures) or transfer or is administered a medication, blood, or blood components.			
C.1.1.1. The hospital maintains clear channels of communication for urgent critical results.			
C.1.1.2. The hospital has systems in place to ensure safe communication of pending test results to patients and care providers after discharge.			
C.2.1.1. The hospital has an infection prevention control program, including infection prevention and control policies, protocols, and procedures, as well as a multidisciplinary committee.			
C.2.1.2. The hospital ensures proper decontamination of all equipments with special emphasis on high-risk areas.			
C.3.1.1. The hospital implements guidelines, including WHO guidelines, on safe blood and blood products.			
C.3.1.2. The hospital has safe pre-transfusion procedures, e.g., recruitment, selection, and retention of voluntary blood donors and blood screening (e.g., HIV and HBV).			
C.5.1.1. The hospital ensures availability of life-saving medications at all times.			
D.2.1.1. The hospital segregates waste according to the hazard level (see the guidelines) and color codes it.			
D.2.1.2. The hospital conforms to guidelines on the management of sharps waste, including WHO guidelines.			

Results

Based on the results of the present study, hospital A could meet 77.5% of the critical standards, as shown in Table 3. The highest score on critical standards was obtained in the domain of leadership and management (88.88%), followed by safe evidence-based clinical practices, patient and public involvement, and safe environment, respectively (78.58%, 50%, and 50%, respectively).

Based on the results, the level of adherence to standards in hospitals B and C was similar to hospital A, although the percentages were different in each domain. In hospital B, 70%, 83.33%, 64.28%, and 50% of critical standards were met in the domains of leadership and management, safe evidence-based clinical practices, safe environment, and patient and public involvement, respectively.

As the findings indicated, among the selected hospitals, hospital C could obtain the highest score in the domain of leadership and management (94.44%), followed by the domains of safe evidence-based

clinical practices (71.42%), patient and public involvement (50%), and safe environment (50%); the overall score of hospital C was estimated at 77.5%.

Table3: Summary of the results

Hospital A		
Domains	**Score**	**(%)**
A. Leadership and management	8 out of 9	88.88
B. Patient and public involvement	1 out of 2	50
C. Safe evidence-based clinical practices	5.5 out of 7	78.58
D. Safe environment	1 out of 2	50
Total	15.5 out of 19 (one item was not applicable in this hospital)	77.5
Hospital B		
Domains	**Score**	**(%)**
A. Leadership and management	7.5 out of 9	83.33
B. Patient and public involvement	1 out of 2	50
C. Safe evidence-based clinical practices	4.5 out of 7	64.28
D. Safe environment	1 out of 2	50
Total	14 out of 19 (one item was not applicable in this hospital)	70
Hospital C		
Domains	**Score**	**(%)**
A. Leadership and management	8.5 out of 9	94.44
B. Patient and public involvement	1 out of 2	50
C. Safe evidence-based clinical practices	5 out of 7	71.42
D. Safe environment	1 out of 2	50
Total	15.5 out of 19 (one item was not applicable in this hospital)	77.5

Discussion

In 2004, the 57th World Health Assembly announced the establishment of an international alliance to improve patient safety. Accordingly, the World Alliance for Patient Safety was launched in that year. The aim of this alliance was to foster international collaboration to improve patient safety (8). Moreover, the increasing attention to safety issues in the health sector initiated the EMRO to implement PSFHI in 2007 (29).

Accordingly, we implemented PSFHI in three hospitals, affiliated to TUMS to assess patient safety in these hospitals. In this study, we assessed the critical standards in the selected hospitals.

The maximum score on critical standards was 20; as one item was not applicable for the selected hospitals, the total score was 19. All three hospitals could meet more than 70% of the critical standards, which is considered suitable for the first evaluation.

Similarly, in a study by Bahadori in an eye hospital, 77.78% of the critical standards were met (30).

Additionally, in a previous report by Sidiqqi, conducted in seven countries, the range of compliance to critical standards varied from 2 in Yemen to 15.5 (the total score was 20) in Egypt (31). The score obtained in our hospitals was similar to the highest score in the mentioned study.

According to the results of the present study, the highest score on critical standards was attributed to the domain of leadership and management. This indicates the high level of managerial commitment to PSFHI in all the selected hospitals. In fact, the high level of managerial commitment is a key factor for supporting patient safety activities (32, 33).

The performance of hospitals in the domain of safe evidence-based clinical practices was also acceptable. This domain mainly refers to the safety standards in laboratory, radiology, and infection control units, which play a significant role in patient safety. In particular, healthcare-related infection is a major threat to patient safety, leading to patient disability, death, and additional care provision (8). In terms of technical matters such as safe environment, which includes management and segregation of sharps waste, and patient and public involvement, which covers patient consent and identification, the hospitals are required to take more effective measures. Overall, based on the findings, implementation of PSFHI in hospitals has a great impact on improving patient safety (34).

Conclusion

Patient safety improvement in hospitals needs a system-wide action plan and comprehensive approaches. It seems that PSFHI is a suitable program for fulfilling patient safety goals. All the hospitals in this survey had a good managerial commitment to patient safety; therefore, they could obtain high scores on critical standards.

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