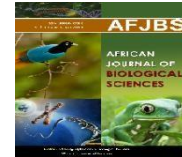


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Healthcare Quality and Patient Safety Policies at Pediatric Tertiary Hospital: An Exploratory Study

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Abstract: For healthcare settings, many policies are required to be existing for better standardized performance. These policies should assist health professionals in acquiring and maintaining patient-centered care skills, as well as encourage organizations to build a patient-centered culture.

Aim this study aims to is to identify the available policies and procedures at nephrology unit of Kasr Alainy tertiary hospital in order to improve the quality of care

Methods: Health system exploratory study executed at pediatric nephrology unit by reviewing the existing policies and procedures documents through two steps: quantitative analysis using an adaptive checklist from Joint Commission International Accreditation Standards for Hospitals to identify the existing and missing unit policies and procedures compared to required written policies and procedures, then qualitative analysis through reviewing the existing policies documents according to policy definition, presence of approvers, quality written procedures, attached measurement list, and attached data collection forms.

Results: for the quantitative analysis: health care organization management standards policies achieved the highest score, while patient centered standards policies achieved the least score (91.5 % and 70.2% respectively). The international patient safety goals revealed absolute absence of the policies and procedures (0 %). On the other hand, patient and family rights, care of patients, quality improvement, governance leadership and direction, and management of information domains achieved absolute completeness of the required written policies and procedures (100%). According to qualitative analysis: document content analysis revealed that although the policies were written in a structured pattern but most of them have no attached measurement indicators list.

Conclusion: Based on policies and procedures document review, unit written policies account for 80.4% out of recommended JCI required written policies and procedures. On the other hand unfortunately patient safety goals policies are absent.

Key words: Patient safety, Healthcare Policies, Quality Improvement.

Introduction: Perhaps the most difficult concept to describe is "quality of treatment". Quality is defined by the Institute of Medicine (IOM) in 1990 as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" [2]. Quality, according to the IOM,

is defined by what is done and how well it is done, and it is linked to doing the right thing - delivering essential health care services-, at the right time -when a patient requires them-, and in the right way -using appropriate tests or procedures- [3,4].

The IOM suggested six goals for development a high-quality care : equitable, timely, efficient, patient-centered, effective, and safe .The equitability refers to introducing care which although due to personal features, including socioeconomic status, ethnicity, and gender, it has the same quality. The centrality of patient means delivering care which respond to patient inclinations, values and requirements, and guaranteeing that the values of the patient lead all clinical decisions [2,5].

According to the World Health Organization (WHO), the effectiveness of healthcare systems to detect health issues, identifying priorities, recognizing innovative solutions, and assigning services to maximize quality of care is determined by the proper collection, management, and information utilization. Including required policies, standards, and procedures [6].

By definition, policy is a government or other institution's law, rule, procedure, administrative action, incentive, or voluntary practice [1]. While policy assessment is the systematic gathering and analysis of data in order to make decisions regarding the settings, actions, characteristics, or consequences of one or more domains of the Policy Process, Assessment can help to inform and enhance policy adoption, implementation, development, and effectiveness, as well as provide a solid foundation for policy interventions [7].

For healthcare settings, many policies are required to be existing for better standardized performance. These policies should assist health professionals in acquiring and maintaining patient-centered care skills, as well as encourage organizations to build a patient-centered culture [1,7]. Evidence suggests that patient-centered care improves disease outcomes and quality of life, and that it is crucial for reducing racial, ethnic, and socioeconomic gaps in health care and outcomes. To build a coordinated national policy in support of patient-centered care, policymakers must pay attention to these values [8].

Other required crucial policies are concerned with maintenance and human resources. Healthcare organizations have unique characteristics that set them apart from other businesses, such as the presence and ongoing renovation of a wide range of high-tech diagnostic and treatment equipment, as well as human resources with varying levels of training [9].

Patient safety is defined by World Health Organization (WHO) as 'the prevention of errors and adverse effects to patients associated with health care' and 'to do no harm to patients' [10].

The importance for patient safety policies comes from that the estimated 64 million disability-adjusted life years are wasted every year because of unsafe care globally [11]. WHO reports that the probability of patient's death during a medical procedure due to an avoidable medical accident is 1 in 300, which is significantly more than the risk of passing away while flying. Millions of patients worldwide are impacted by the most frequent causes of patient harm, which include inaccurate or delayed diagnosis and unsafe medication practices [12].

Errors in patient management can occur when hospital workers fail to follow policies and procedures. Sharps disposal, hazardous waste handling, availability of personal protective equipment, isolation and staff knowledge of the placement of the exposure control plan all improved significantly when documented infection control policies and procedures were followed [13].

The availability of data on the scope, types, and causes of errors, adverse events, and near misses is critical for developing and implementing patient safety policies, strategies, and plans. More comprehensive research are also needed to estimate the entire cost of unsafe treatment [11].

The aim of this study is to identify and evaluate the available policies and procedures at nephrology unit of Kasr Alainy tertiary hospital in order to improve the quality of care.

Methods:

This study is a health system exploratory study executed at pediatric nephrology unit by reviewing the existing policies and procedures documents. Policy analysis was performed into two steps:

First step (quantitative analysis): Using an adapted checklist from JCI Hospital Standards version 5 [14] specifying required written policies and procedures with including only the applicable ones (applicable to the study setting) regarding the following sections and related domains:

Section 1: Patient centered standards with 47 applicable standards require policies distributed in the related domains as following:

- International Patient Safety Goals (no= 9)
- Access to Care and Continuity of Care (no=9)
- Patient and Family Rights (no= 6)
- Assessment of Patients (no= 6)

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- Care of Patients (no=5)
- Medication Management and Use (no = 12)

Section 2: Health care organization management standards with total 47 applicable standards require policies distributed in the related domains as following:

- Quality Improvement and Patient Safety (no=5).
- Prevention and Control of Infections (no=9).
- Governance, Leadership & Direction (no= 11).
- Facility Management and Safety (no= 11).
- Staff Qualifications and Education (no= 5).
- Management of Information (no= 6).

Section 3: Academic medical center hospital standards with 8 applicable standards require policies distributed in the related domains as following:

- Medical Professional Education. (no=2)
- Human Subjects Research Programs (no= 6)

The unit available written policies and procedures were compared to the pre specified JCI required applicable written policies to identify the unavailable policies.

The existing policies & procedure percent achieved score per each section and its related domains were calculated by dividing the number of existing policies & procedures by the total number of JCI required applicable written policies & procedures and calculated as percent for each domain and section.

Percent Achieved Domain (section) Score =

$$\frac{\text{no of existing policies\& procedures for each domain (section)}}{\text{no of JCI required applicable written policies\& procedures for same domain (section)}}$$

Second step (qualitative analysis):

Each available policy document was reviewed individually regarding the presence of following points: policy release date, number, and policy definition, presence of approvers, quality written procedures, attached measurement list, and attached data collection forms.

Results

Reviewing the available documents of policies and procedures revealed that there are 14 available policies as following : Nursing care services, Human resources, Peritoneal dialysis, Hemodialysis , Intensive care unit services, Internal pharmacy, Patient handling , Infection control, Performance measurement management, Purchasing and storage, Ultrasound service, Maintenance& standardization , Documentary and Filing system.

Quantitative assessment of unit written policies and procedures

Based on JCI required applicable written policies and procedures, table (1) reveals that more than three quarter of the total required written policies and procedures were present. Regarding the percent achieved section scores, health care organization management standards achieved the highest score, while patient centered standards achieved the least score (91.5 % and 70.2% respectively). In terms of the percent achieved domain scores, the international patient safety goals revealed absolute absence of the policies and procedures (0 %). On the other hand, patient and family rights, care of patients, quality improvement, governance leadership and direction, and management of information domains achieved absolute completeness of the required written policies and procedures (100%).

Table (1): Percent achieved scores of the reviewed unit policies and procedures compared to the required JCI standards

Section	Domain	JCI Required no*	Unit Existing no	Percent Achieved Domain Score	Percent Achieved Section Score
Patient Centered Standards	International Patient Safety Goals	9	0	0 %	70.2 %
	Access to Care and Continuity of Care	9	7	77.8 %	
	Patient and Family Rights	6	6	100 %	
	Assessment of Patients	6	5	83.3 %	

	Care of Patients	5	5	100 %	
	Medication Management and Use	12	10	83.3 %	
Health Care Organization Management Standards	Quality Improvement and Patient Safety	5	5	100 %	91.5 %
	Prevention and Control of Infections	9	8	88.9 %	
	Governance, Leadership, and Direction	11	11	100 %	
	Facility Management and Safety	11	9	81.8 %	
	Staff Qualifications and Education	5	4	80 %	
	Management of Information	6	6	100 %	
Academic Medical Center Hospital Standards	Medical Professional Education	2	1	50 %	75 %
	Human Subjects Research Programs	6	5	83.3 %	
Total		102	82	80.4%	

* The required policies and procedures according to JCI hospital standards includes only the applicable after excluding the non-applicable policies procedures.

Qualitative assessment of existing written policies and procedures:

Content analysis of all the available written policies and procedures was carried out through individual reviewing of each policy document. All existing policies were guided by many standards references such as Egyptian accreditation standards (April 2013- second Edition), National Infection Control Guide (2016- third Edition), Labor law no 12 for 2003 as well as international organization for standardization (ISO 9001-2015)

Table (2) reveals that all the policy documents have defined policy title, description, related committee responsible for implementing this policy, and approved by both quality department manager and unit manager. As regards presence of quality written procedures, hemodialysis has ill-defined procedures titles, while performance and nursing policy, frequency of periodic measurement was not clear.

For all policies documents, the indicators list was not attached to the related policy. On the other hand, data collection forms were not attached to both infection control and internal pharmacy policy.

Table (2): Content analysis of the available written policies and procedures

Policy name	Unit Layout items						
	Date	Policy Number	Approver's	Definition	Quality Procedure writing	Attached indicators list	Attached data forms
Human resources	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Infection control	Yes	Yes	Yes	Yes	Yes	Not attached	No
Patient handling	Yes	Yes	Yes	Yes	Yes	Not available	Yes
Intensive care	Yes	Yes	Yes	Yes	Yes	Not attached	Yes
Hemodialysis	Yes	Yes	Yes	Yes	No*	Not attached	Yes
Peritoneal dialysis	Yes	Yes	Yes	Yes	Yes	Not attached	Yes
Performance measurement	Yes	Yes	Yes	Yes	No**	Not attached	Yes
Nursing care	Yes	Yes	Yes	Yes	Yes	Not attached	Yes
Internal pharmacy	Yes	Yes	Yes	Yes	Yes	Not attached	No

*ill-defined procedures titles

** Frequency of periodic measurement is not clear.

Discussion:

In the present study, evaluation of unit existing written policies and procedures against recommended required written policies by JCI, it was found that unit policies achieved 80.4% of the required written policies. On the other hand, it was unfortunately found that there is no patient safety goals written policy nor procedures.

A previous study linking the Joint Commission core measures with the patient safety goals stated that despite the fact that the core measures, safety goals, and related quality guidelines have been widely disseminated, there is significant variance in their implementation across institutions. This variance may be due to differences in guideline

familiarity, provider training, tools and processes to ensure that suggested care is performed and documented. Moreover, compliance rates have been linked to hospital type, size, and location. Other hospital characteristics, such as physician leadership and organizational support, appear to have a role in the consistent adoption of quality standards of practice [15].

On national level , a study was conducted in Jordan and Lebanon revealed that the two countries lack clear national policies for patient safety and quality improvement that outline the parameters of quality. Furthermore, health care institutions (public and private) are not required by law to put in place any particular quality improvement measures [16].

A survey of acute care hospitals in Missouri and Utah was conducted to evaluate changes in the patient safety systems since the publication of the IOM studies. It was found that 74% of hospitals reported implementing a documented written patient safety policies, while 9% reported having none at all. The highest degree of patient safety systems seems to be found in the surgical field. Improvements were seen in other domains, such as pharmaceuticals, where patient safety and mistake avoidance have long been prioritized [17].

In England, 20 out of the 157 surveyed organizations were claimed they don't have a policy for use of innovation surgical technique/device . By analyzing the received policies, 50 policies were out of date (i.e., the scheduled review date had past), and 5 policies lacked a specified review date [18].

Another study concluded to assess the formal and informal policies at medical setting revealed that bottom-up approach for policies adoption shows better implementation culture rather than top-down approach [19].

Conclusion and recommendation:

Based on policies and procedures document review, unit written policies account for 80.4% out of recommended JCI required written policies and procedures. On the other hand unfortunately patient safety goals policies are absent.

It is recommended to implementing the proposed patient safety policy. Additionally to rewrite the existing policies and procedures in a standardized way through quality procedures writing for hemodialysis services. Additionally, related performance indicators lists should be attached to the corresponding policy..

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