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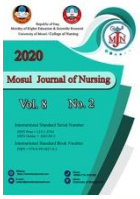

Nursing Quality Monitoring In Pediatric Surgery Center In Al-Khansa Teaching Hospital

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Abstract

A descriptive analytical study was conducted through out the period between the first of November 2005 to the first of August 2006 in order to assess the practice of the nursing staff in the Pediatric Surgery Center in AL-Khansa' Teaching Hospital in Mosul.

The sample of study included all the nursing staff working in the Pediatric Surgery Center (20 nurses).

After directing an open-end question to (13) professionals medical staff and nurses working in the center to address the nursing activities carried out in center wards, the most common nursing activities were selected (Dressing, Intravenous infusion, placing intravenous cannula, checking axillary temperature, and intravenous drug administration). The reliability of the observational tool was determined through the application of test-retest technique and computation of Pearson Correlation Coefficient (r=0.93), the content validity of tool is determined through a panel of experts.

The finding of study indicated that (95%) of nursing staff were males, and (10%)were graduates of Nursing College, while the remaining nurses graduated equally from Secondary School and Nursing Institute. The analysis of variance of study subject showed no-significant differences according to age, marital status, training session, level of education, and work in special department. When reviewing the mean of scores of the steps for all the procedures, it showed that the basic steps of each nursing procedure which may be shared among all procedures fluctuated among excellent, acceptable and weak measures with strong tendency to weakness.

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The study concluded that there are intense shortage in nursing staff, threatening of the feministic nursing staff, and continuous learning and training programs were not active and dependency on low nursing educational levels.

The study recommended the necessity of staff to be highly qualified through activation of continuous learning and training, also the center should be provided by a sufficient number of nursing staff especially females, and the activation of nursing job description is necessary.

Key word: (QUALITY- MONITORING – PEDIATRIC- SURGERY)

Introduction

Demand for quality in all areas seems to be a rallying point for today's society. In addition to the demand for quality, the public wants health care delivered at a lower cost with greater accessibility, accountability, efficiency and effectiveness. (Bliersbach, 1991).

Approaches to the improvement of quality care have been evident in nursing since the days of Florence Nightingale, from 1912 to 1930 the interest in quality nursing education led to the development of nursing organization involved in accrediting nursing programs. After world war II the attention of the emerging nursing process was the chosen method and included evaluation of how the activities of nurses helped clients. (Maibusch, 1994).

The primary purpose of a quality assurance program is to ensure that the results of an organized activity are consistent with the expectations. All personnel affected by a quality assurance program should be involved in its development and responsible for the quality of services, the key to that quality is the knowledge, skills, attitudes of the personnel who deliver the services (Stanhope and Lancaster, 1996).

The long term goals of quality improvement are to achieve optimal patient outcomes in terms of patient satisfaction with care within a well functioning system while the more immediate purposes of any quality improvement activity are to improve the efficiency and the effectiveness of the service rendered, even these shorter goals present a challenge to nursing staff, (Hunt, 1992).

Statement of the Study

Nursing Quality Assurance in Pediatric Surgery Center in AL-Khansa' Teaching Hospital.

Aim of the Study

The aim of the present study is to assess the performance of nursing activities accomplished by the nursing staff in the Pediatric Surgery Center in AL- Khansa' Teaching Hospital in Mosul.

Objectives of the Study

1- To explore the structure of the center.

2- To assess some of nursing activates in the center through:

a. Acquaintance with the demographic characteristic of the nursing staff working in the center.

b. Assessment of such nursing procedures undertaken in the center.

c. Identification of the differences between the practice and some variables related to nursing staff.

Components of Quality Assurance

Three different aspects of health care can be evaluated in quality assurance program;

Structure :

Within which the care is given (e.g. facilities, equipment, and staff). The philosophy and objectives of any agency serve to define the structural standards of the agency. Evaluation of the structure is a specific approach to quality appraisal. In the evaluation the structure of an organization, the evaluator determines whether the agency is adhering to the stated philosophy and objectives. Are primary, secondary, and /or tertiary preventive services offered. Standards of structure are defined by the licensing or accrediting agency. Standards of structure are evaluated internally by a committee composed of administrative, management, and staff members for the purpose of doing self-study. (Stanhope and Lancaster, 1996).

Process:

The process of giving care which refers to the actual activities carried out by the health care providers, includes physiological intervention as teaching and counselling as well as physical care measures. The evaluation of process standards is a specific appraisal of the quality of care being given by agency providers, such as nurses. Agencies use a variety of methods to determine criteria for evaluating provider activities.

Outcome :

Outcome of the care refers to the result of the activities in which the health care providers have been involved. (Chance, 1990; and Donabediam, 1996).

Methodology

Administrative Arrangement:

Prior to the actual collection of the data, written official permission is issued from the Ministry of Health, Nineveh Health Directorate

Design of the study :

In order to achieve the objectives of the present study, a descriptive correlational design was carried out for the period between the first of November 2005 to the first of July 2006.

Setting of the Study :

The study was carried out in the Pediatric Surgery Center in Al-Khansa Teaching Hospital in Nineveh Governorate.

Sample of the Study :

All the nurses working in the Pediatric Surgery Center in Al-Khansa Teaching

Hospital were included as subjects in the study. They are (20) nurses.

Instrument of the study :

a- Prior to the selection of the nursing procedures observed during the study, the researcher addressed an open-end question to(13) of the nurses and physicians working in the center to identify the nursing procedures undertaken in this field of care. They enumerate huge numbers of procedures as demonstrated in Table (1) below.

Data Collection Method :

A structured observational tool was adopted for data collection. Five nursing procedures were selected to be observed for three trials for every subject of the sample and the mean was depended.

Table (1) : Nursing procedures from the professional staff point of view

No.	Procedure	F.
1	Sterile wound dressing	11
2	Insertion I.V cannula	10
3	Checking vital sings	10
4	Drug administration	9
5	I.V. fluid infusion	8
6	Urethral Catheterization	4
7	Post-operative management	4
8	Assure the safety of the incubator	3
9	Patient unit care; concurrent & terminal	3
10	Prepare suctioning devices stand by.	3
11	Blood and it's products transfusion	3
12	Drainage tube removing	3
13	Care of NG tube	3
14	Anal dilatation	3
15	Enema	3
16	Suctioning	3
17	Oxygenation	3
18	Care of special cases (as urethral dilatation in hypospedias)	2
19	Care of emergent cases	2
20	Nebulization	1
21	Osteomy care	1
22	Pre-operative preparation	1

23	Perform all laboratory investigation needed and ordered by physician	1

b- Five nursing procedures were selected to be the base of this descriptive-analytical study due to their multitude repetition, while the other procedures were excluded due to their specialization and their less repetition.

c- After the identification of the five nursing procedures to be observed by the study, primary formulas of procedures steps were identified depending on review of related references and consultation of many specialized nursing officials, and after a pilot study, the final draft is developed to be depended on by the study.

d- The final draft of the tool items have (2) options (No=0, Yes=1).

Limits of the Study :

a- The sample of the study was include to all nurses working in the Pediatric Surgery Center.

b- Pediatric Surgery center was specified to be the setting of the study, not AL-Khansa' teaching hospital.

c- The study focused on practice as a main topic of quality and excluded the other topics (Knowledge and Attitude).

d- The two working shifts of the sample (morning, evening and night shifts) were taken into consideration when observing the procedures.

e- The study focused on structure and process as components of quality services and excluded the outcome because the patient did not stay in the ward more than 1-2 days post operatively.

Pilot Study : A pilot study was conducted prior to data collection from 1st/ December / 2005 to 30th / December / 2005, it aims to :

1- Identify the clarity and content adequacy of the observational tool.

2- Define the barriers that can be encountered through data collection.

3- To determine the reliability and validity of the study instrument.

Validity :

It means that the instrument measures what it is intended to measure. (Margaret, et al, 1997). To ensure the validity of the tool, it is presented to (11) experts in many fields .they provided few comments which were taken into consideration in the final draft of the tool. **Reliability of**

the Instrument :

In order to identify the reliability of the tool, it was applied on (9) nurses working in the center and after nearly 20 days they were reobserved later. They were excluded from the study sample. The results of test and retest were analyzed to indicate the correlation between the

scores of the two tests. Pearson Coefficient Correlation was used, it was (r=0.93) and it was significant at (P<0.001) level. Eventually, the final draft was depended in the study .

Statistical Analyses

To analyze the results of the present study the researcher depends on :

1- Descriptive statistic (frequency, percentages, mean, and standard deviation.
2- Inferential statistic (t-test, analysis of variance (ANOVA), Duncan test and stepwise linear regression).
3- Mean of score at which they divided to three categories; below 0.5\ weak, between 0.5-0.84 \ acceptable, and more than 0.85 \ excellent) (Ventura,2001)

Limitation of the study

The study faced the following limitations :

1- Unavailability of national research studies to support the finding of the present study.
2- Insecure status of the country.
3- Lack of the references related to the topic of the study.
4- Fewness of nursing staff working in this center.

Demographic Characteristics

Table (1) : Socio-demographic characteristics of the nurses.

Characteristics	Mean ± SD	Groups	No.	%
Age (years)	32.25 ± 9.04	<30	13	65.0
		30-35	3	15.0
		≥35	4	20.0
Sex	Male		19	95.0
	Female		1	5.0
Marital status	Single		9	45.0
	Married		11	55.0
Level of education	secondary school		9	45.0
	Institute		9	45.0
	College		2	10.0
Duration of work (years)	8.98 ± 10.11	<5	10	50.0
		5-10	5	25.0
		>10	5	25.0

Duration of work in the specific departments (years)	5.37 ± 5.03	<5	11	55.0
		5-10	5	25.0
		>10	4	20.0
Training Session	No		17	85.0
	Yes		3	15.0

Table (1) shows the socio-demographic characteristics of the studied nurses. The studied sample consisted of 20 nurses. The mean age of the nurses was 32.25 ± 9.04 year, 65% of them were less than 30 years age. 95% of them were males, for marital status of the nurses 55% of them were married and the others were single. Additionally, 10% of the nurses were graduated from nursing college, while the remaining nurses graduated equally from secondary nursing school and nursing institute with 45% for each. The mean duration of nursing work in hospitals was 8.98 ± 10.11 years, 50% of them have worked for less than 5 years, and 25% for each nurse with 5-10 years and >10 years. Furthermore, the mean duration of work in the specialized department was 5.37 ± 5.03 years, more than 50% of them had less than 5 years of work. For training session of the nurses, meager percent of the sample (85%) have not received any qualified training or program.

Table (2) : Results of the studied activities scores compared with the theoretical mean.

Procedures	Mean	SD	Theoretical mean	t-value	p-value
Sterile dressing change	19.13	1.74	16.5	6.79	<0.001
Intravenous infusion	12.32	1.07	9.5	11.75	<0.001
Checking Axillary temperature	7.62	1.60	8.5	-2.47	<0.05
Placing intravenous cannula	16.93	0.70	11.5	34.84	<0.001
Drug administration	8.97	1.30	7.5	5.04	<0.001

Table (2) shows significant differences in the results of nurses testing for the studied activities compared with the theoretical mean at p<0.001 for sterile dressing(t=6.79), intravenous infusion (t=11.75), placing intravenous cannula (t=34.84), and drug administration (t=5.04). While it is significant at (p<0.05) with check**.**

Discussion

The lack of references about such project makes it difficult to find base data for the purpose of comparing the results with those of others.

Demographic Characteristics :

Table (1) demonstrates the distribution of the sample according to their characteristics. Nearly 2/3 of the sample (65%) were the youngest (less than 30 years). Previous economic blockade (1990-2003) the country suffered from compelled large number of employees to leave jobs, so the nursing vocational schools (matutirial and vesperal) share in solving the huge shortage in nursing staff, so all the graduate persons from these schools are around this age group.

Most of the sample (95%) were males. Each year the nursing vocational schools graduate nearly more than "100" male versus "10-20" females. In addition to that, the Pediatric Surgery Center is subordinate to Al-Khansa obstetrical and Gynecological Teaching Hospital, so the female nurses are appointed to work in the obstetric wards, and naturally the male nurses will work in the pediatric wards as well as the Surgery center.

Nearly 1/2 of the sample (55%) were married. Traditionally, in our society after the person has an occupation he / she try to marry.

Most of the sample were secondary and institute graduates (45%) for each of them and low percentage (10%) were college graduates. This is due to the fact that the college graduates are appointed to work in specialized sites as CCU, operating theaters, Artificial Kidney Ward, rehabilitation department, and health teaching. Fifty percent of the sample had less than 5 years work. This is because they were graduated in the last few years.

More than 1/2 of the sample (55%) had less than 5 years work in the specific department, it can be due to the above cause.

Majority of the sample (85%) had not any training session. This can be due to many causes: shortage of the nursing staff and the overload working, undesired to share in training session or the hospital has not any policy for that.

The nurse plays an effective and great role in different types of cases of the patient. There are no doubt that the nurse who works in the (PSW) must be intelligent enough and qualified for these tasks in addition to his / her general duties, therefore, he/she must have a good scientific

background about the professional and details related to pediatric surgery and critical care in order to identify the problems from which the child suffers and which make the proper decision for intervention. (NANDA, 2000).

❖ Identification of the patient :

Identification of the patient is the first and very important procedure before any interference with the patient by medical staff members. (Mark, et. al., 2003).

The nurse should not depend just on the name of the patient but she can identify the patient also by comparing the number of the patients present on special wrist band

with the number who set on the special patient chart and by taking and recording complete demographic data on the special patients data base in the hospital . The benefit of identifying the patient is to prevent error and mix among patients and to deliver the right and suitable care to the right patient and to prevent any administrating and legal problems. (Keen, 1995).

❖ Physician Order :

A physician order is required for any interference to be administered by a nurse. The nurse should be aware of the nurse practice act and institutional policies regarding which providers, other than physicians, may prescribe the order. A medication order is necessary for any drug to be given by a nurse. The nurses or a designated unit secretary writes the prescribed complete order on the appropriate Medication Administration Record (MAR). The transcribed order includes the client's full name, room, and bed number (which is usually pre stamped on the order form), data of the order is written, drug name, dose, route of administration, frequency. If a medication order seems incorrect or inappropriate, the nurse consults the prescriber. The nurse who gives the wrong medications or an incorrect dosage is legally responsible for the error. (Arnold, 1998).

❖ Clinical Teaching :

Keep in mind that teaching can take place at any time. It can be scheduled or unscheduled. In general, however, try to avoid noisy, hectic times when clients are distracted (such as during, before, or after administration of medication, and at any undertaken procedure, utilize any time at which learning will be optimum. (Eileen, 2003).

The role of the nurse in client education is a legal mandate. The nurse practice act in each state indicates that teaching is the primary role for the registered nurse. (Smith, 1987; Smith, 1989).

❖ Hand Washing:

Hand washing is one of the most effective ways to reduce the number of microorganisms on the hands, by preventing the transfer of microorganisms from one object to another or from person to person by the nurse. Any person may harbor microorganisms that are harmless to that person but may be potentially harmful to another person if they gain a petal of entry. Health care workers must wash their hands before and after giving care to patients. (Garner, 1996).

❖ Prepare The Equipment Needed :

The nurse during delivery of daily nursing care needs some time for special instruments, fluids, and materials. Preparing the equipment have many benefits, it saves time, recognize the work steps, reduce the patient anxiety, and ensuring quality care such as sterilization techniques.

❖ **Documentation :** Documentation is any thing written or printed that is relied

on as a record of proof for authorized person (Szczesny, 1994).

Documentation of Nursing Note :

Nursing documentation in the care of a child differs in several respects from that required in caring an adult. The child may not be able to communicate the source of pain or discomfort, for example, a child's inconsolable crying may be an indication of infiltration of I.V line, or sepsis.

Conclusions

On the basis of the objectives of the present study and the results of data analysis, the following conclusions have been raised :

1. Intense shortage in nursing staff.
2. Pressing need for expansion of services provided by the center.
3. Exclusion of some accidents from treatment (as burns and plastic surgery).
4. Interaction in nursing activities among the nursing staff.
5. Threatening of the feministic nursing profession.
6. Dependency on initiative nursing educational levels.
7. Continuous teaching and training is not active.
8. Despite the acceptable level of performance of the basic or fundamental nursing procedures, major or terrible mistakes which can be harmful to the staff or threatening to the life of the patient are present.

Recommendations

1. Support the center by sufficient number of nursing staff especially females.
2. The necessity of the nursing staff to be highly educated and qualified is arising.
3. Activation of nursing job description is necessary.
4. Expansion of services provided by the center through increasing patients beds.
5. Inclusion of all accidents the child suffer from and need Surgery intervention.
6. Activation of continuous nursing education, training or dependency of compulsion obligation regarding that from the agency.
7. Enhance the qualification or professionalism of the nursing staff working in the center.
8. Use of the mass media for acquainting the center to the community.

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