

Evaluation of Nurses' Practices about Urgent Care for Common Pediatric Cases at Emergency Ward

By

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Abstract

Background: Caring for children in the emergency department (ED) is both rewarding and challenging. The approach to caring the children in the emergency department is completely different than for the adult. Knowledge of age-specific biologic variables is required to identify abnormalities. Objective(s): The aim of this study is to evaluate nurses' practices about urgent care for common pediatric cases at emergency ward. Methodology: A descriptive correlational design, the study carried out to evaluate Nurses` Practices about Urgent Care for Common Pediatric Cases at Emergency Ward. Non-probability (Convenience sample) consists of (67) nurses who work in pediatric emergency department, which are selected based on the study criteria. The study sample consist of (47) nurses from Pediatric Hospital ideal Training Health Care Center. And (20) nurses from Maternal and pediatric Hospital ideal Training Health Care Center. Results: The study results display that all have fair level of practices related to caring of children at pediatric emergency department (n = 67; 100.0%). Conclusion: The study concluded that the nurses who work in pediatric emergency department have fair practices related to caring of common pediatric cases at emergency ward including (febrile seizure, diarrheas, poisoning, and ineffective breathing). Recommendations: There is a need for the continuing nursing education and training courses to enhance nurses' practices related to managing urgent cases in pediatric emergency department.

Keywords: Nurses, Practice, Urgent Care, Common Pediatric Cases, Emergency Ward.

Introduction

Societies are often judged by the care they provide for the young and the weak. The quality of care for injured and ill children has grown tremendously since the formation and growth of pediatric emergency medicine as a subspecialty within the pediatric and emergency medicine communities ⁽¹⁾.

Caring for children in the emergency department (ED) is both rewarding and challenging. The approach to children in the emergency department is completely different than for the adult. Knowledge of age-specific biologic variables is required to identify abnormalities. The ED must be prepared for the pediatric patient ⁽²⁾. The American Academy of Pediatrics and the American College of Emergency Physicians have established a list of recommended pediatric resuscitation equipment and emergency medications ⁽³⁾.

When children fall ill or are injured, they often need urgent or emergency assessment and treatment. Healthcare systems vary. However, the common problem of ill and injured children has resulted in the development of specific services and protocols for their management in many countries. The specific illnesses and injuries vary from site to site, but there is sufficient commonality across the world for us to share knowledge and experience of good practice. The role of an Emergency Pediatric Department may vary from place to place, but is generally to offer: an open access emergency facility, diagnosis, or provisional diagnosis, emergency/urgent investigation, emergency management, referral to next appropriate care, e.g. Intensive care, hospital inpatient care, community care, discharge with advice, data collection for epidemiology and accident prevention, Training in emergency pediatrics, the whole range of conditions present to emergency departments, including medical conditions from the child with collapse, convulsions or severe respiratory difficulties, to the child with a mild pyrexia or an upper respiratory tract infection. Similarly, and presentation with trauma crosses the whole spectrum from major multiple traumas to the most minor trauma requiring no treatment. Children attending the hospital at a time when they are injured or unwell are often anxious and distressed by their condition and also by the hospital environment. Both the physical surroundings of the department and interactions with staff can help to reassure both the child and the parents ⁽⁴⁾.

The primary goal of health care providers is to provide high-quality, safe care for each child who arrives in emergency department ⁽⁵⁾.

The approach to the care of the sick child, by nature must be family centered. Ultimately, the task is the same for all emergency clinicians; rapid, accurate identification of serious, life-threatening illnesses, with swift intervention to reduce morbidity and mortality.

The most common emergencies encountered in pediatric office practice are respiratory distress, dehydration (and shock), anaphylaxis, seizures and trauma ⁽⁶⁾.

Although minor emergencies and trauma in infants and children are traditionally evaluated and treated in primary care offices and emergency departments, limited office hours and long emergency department wait times have fueled the economy for urgent care centers ⁽⁷⁾.

Methodology

Design of the Study

A descriptive correlational design, the study carried out to evaluate Nurses` Practices about Urgent Care for Common Pediatric Cases at Emergency Ward.

The Administrative Arrangements

Prior to initiation of the actual collection of data, formal administrative approval has been obtained to conduct the study from the following institutions: An official permission is obtained from Ministry of Planning / Center of Statistical Organization (CSO), which is accepted the study instrument. An official permission is obtained from Kirkuk health Directorate, regarding (Pediatric, Maternal and pediatric Hospitals) ideal training health care centers.

Ethical Considerations

After receiving the approval of the College of Nursing, University of Baghdad for the study, the student researcher discussesssssd study details with officials at Pediatric Hospital and Maternity and Children Hospital.

The Setting of the Study

The study was carried out at Kirkuk city at Pediatric Hospital & Maternity and Children

Hospital in Kirkuk City, Pediatric Hospital receives patients from the age of 0 day to 14 years and the hospital was established in 1964, It contains 140 beds, 14 of them are in the emergency department, it receives Internal pathology diseases only. The Maternal and pediatric Hospital receives pregnant women and pediatric patients up to the age 14 years, the hospital was established in 2019. It contains 157 beds. 16 of them are in the emergency department.

Sample of the Study

Non-probability (Convenience sample) consists of (67) nurses who work in pediatric emergency department, which are selected based on the study criteria. The study sample consist of (47) nurses from Pediatric Hospital ideal Training Health Care Center. And (20) nurses from Maternal and pediatric Hospital ideal Training Health Care Center.

The sample size was determined based on a margin of error of 5%, a confidence level of 95%, a population size of 78, and a response distribution of 50%. Thus, the recommended sample size would be 65. The final sample size is 67.

Data Collection Methods

Data were collected using a checklist. Data were collected for the period from March 3rd, 2022, to June 2nd, 2022

Rating and Scoring of the Instrument

Nurses' practices items were rated on a 3-point Likert type scale of 1 for (Not applied), 2 for (Applied incorrectly), and 3 for (Applied correctly).

Statistical Data Analysis

The statistical package for social sciences (SPSS) for Windows, version 26, Chicago, IL, was used to analyze the data. The descriptive statistical measures of frequency, percent, mean, and standard deviation were used to describe nurses' sociodemographic characteristics. The inferential statistical measures of Friedman's Test, Mann Whitney U, and Kruskal-Wallis Test were used.

Results of the Study

Table 1. *Participants' sociodemographic characteristics (N = 67)*

Variables	Frequency	Percent
Age (Years)		
20-30	46	68.7
31-40	10	14.9
41-51	11	16.4
Mean (SD): 25.56 ± 8.78		
Gender		
Male	43	64.2
Female	24	35.8
Educational level		
Nursing graduate	19	28.4
Associate degree (Diploma) in Nursing	47	70.1
Bachelor's degree	1	1.5
Years of work in nursing		
1-5	46	68.7
6-10	8	11.9
11-15	6	9.0
16-20	6	9.0
21-30	1	1.5
Mean (SD): 5.23 ± 6.31		
Years of work in Emergency Department		
1-5	56	83.6
6-10	7	10.4
11-15	4	6.0
Mean (SD): 2.89 ± 3.46		

Table 2. *Nurses' overall practices level*

Practice Level	Frequency	Percent
Poor	0	0.0
Fair	67	100.0
Good	0	0.0

Cut-off-point: 231-384 = Poor, 385-540 = Fair, 541-693 = Good

The study results display that all have fair practices related to pediatric emergency department ($n = 67$; 100.0%).

Table 3. *Nurses' practices related to febrile seizure over time (N = 67)*

Febrile Seizure - Impaired Level of Consciousness	Observation	Mean (SD)	Mean Rank	Chi-Square	df	Asymp. Sig.	Mean	Eval.
1. Keeping oxygen, suction, and airway equipment at bedside	1	1.97 ± 0.17	1.94	12.286	2	.002	6.02	Fair
	2	1.98 ± 0.21	1.96					
	3	2.0 ± 0.36	2.10					
2. Padding sides of bed or crib	1	1.64 ± 0.68	2.10	8.909	2	.012	4.71	Poor
	2	1.53 ± 0.70	1.95					
	3	1.53 ± 0.70	1.95					
3. Monitoring axillary temperatures	1	1.92 ± 0.70	1.83	13.718	2	.001	6.23	Fair
	2	2.10 ± 0.69	2.01					
	3	2.20 ± 0.72	2.16					
4. Supervising ambulation	1	1.34 ± 0.66	2.22	30.000	2	.000	3.37	Poor
	2	1.01 ± 0.12	1.89					
	3	1.01 ± 0.12	1.89					
5. Supervising mealtime	1	1.00 ± 0.00	2.00	-	2	-	3.00	Poor
	2	1.00 ± 0.00	2.00					
	3	1.00 ± 0.00	2.00					
6. Using chest restraint when child is in a chair	1	1.01 ± 0.12	1.99	2.000	2	.368	3.07	Poor
	2	1.02 ± 0.24	2.01					
	3	1.02 ± 0.24	2.01					
7. Having child wear protective helmet	1	1.02 ± 0.24	1.99	2.000	2	.368	3.14	Poor
	2	1.05 ± 0.34	2.01					
	3	1.05 ± 0.34	2.01					
8. Keeping child away from sharp toys and furniture	1	2.28 ± 0.83	1.71	26.337	2	.000	7.76	Good
	2	2.68 ± 0.49	2.07					
	3	2.79 ± 0.44	2.22					

Cut-off-point: 3-5 = Poor, 5.1-7 = Fair, 7.1-9 = Good

Table 3. (Continued)

Febrile seizure assessment	Observation	Mean (SD)	Mean Rank	Chi-Square	df	Asymp. Sig.	Mean	Eval.
1. Precipitating event	1	1.44 ± 0.82	2.24	32.000	2	.000	3.44	Poor
	2	1.00 ± 0.0	1.88					
	3	1.00 ± 0.0	1.88					
2. Occurrence of an aura	1	1.40 ± 0.55	1.86	15.571	2	.000	4.49	Poor
	2	1.50 ± 0.56	2.01					
	3	1.58 ± 0.56	2.13					
3. Beginning and progression sequence	1	1.10 ± 0.30	2.10	14.000	2	.001	3.10	Poor
	2	1.00 ± 0.0	1.95					
	3	1.00 ± 0.0	1.95					
4. Duration	1	1.00 ± 0.00	2.00	-	2	-	3.00	Poor
	2	1.00 ± 0.00	2.00					
	3	1.00 ± 0.00	2.00					
5. Type of movements	1	1.00 ± 0.00	2.00	-	2	-	3.00	Poor
	2	1.00 ± 0.00	2.00					
	3	1.00 ± 0.00	2.00					
6. Eye movements	1	1.00 ± 0.00	2.00	-	2	-	3.00	Poor
	2	1.00 ± 0.00	2.00					
	3	1.00 ± 0.00	2.00					
7. Tongue or lip biting	1	1.01 ± 0.12	2.00	.000	2	1.000	3.04	Poor
	2	1.01 ± 0.12	2.00					
	3	1.01 ± 0.12	2.00					
8. Apnea or color changes	1	1.04 ± 0.20	2.01	2.000	2	.368	3.10	Poor
	2	1.02 ± 0.17	1.99					
	3	1.02 ± 0.17	1.99					
9. Incontinence	1	1.00 ± 0.00	2.00	-	2	-	3.00	Poor
	2	1.00 ± 0.00	2.00					
	3	1.00 ± 0.00	2.00					

Cut-off-point: 3-5 = Poor, 5.1-7 = Fair, 7.1-9 = Good

Table 3. (Continued)

Febrile seizure assessment	Observation	Mean (SD)	Mean Rank	Chi-Square	df	Asymp. Sig.	Mean	Eval.
10. Level of consciousness	1	1.04 ± 0.20	1.99	2.000	2	.368	3.16	Poor
	2	1.05 ± 0.17	2.01					
	3	1.05 ± 0.17	2.01					
11. Fall	1	1.08 ± 0.28	2.00	2.000	2	.368	3.26	Poor
	2	1.07 ± 0.26	1.98					
	3	1.10 ± 0.39	2.02					
12. Frequency	1	1.01 ± 0.12	2.00	-	2	-	3.04	Poor
	2	1.01 ± 0.12	2.00					
	3	1.01 ± 0.12	2.00					
Actions Taken If seizure does occur								
1. Stay with child	1	1.73 ± 1.37	1.81	21.574	2	.000	5.76	Fair
	2	2.07 ± 1.38	2.10					
	3	1.95 ± 0.84	2.10					
2. Protect child from injury	1	1.62 ± 0.71	2.13	9.733	2	.008	4.56	Poor
	2	1.46 ± 0.50	1.93					
	3	1.47 ± 0.50	1.95					
3. Keep side rails padded and up if child is in a bed or crib	1	2.38 ± 0.69	1.90	8.000	2	.018	5.14	Fair
	2	2.55 ± 0.53	2.03					
	3	2.55 ± 0.53	2.07					
4. Place child on soft, flat surface	1	1.01 ± 0.12	1.87	12.462	2	.002	7.49	Good
	2	1.01 ± 0.12	2.07					
	3	1.01 ± 0.12	2.07					
5. Move sharp objects away from child	1	2.71 ± 0.20	1.92	4.133	2	.127	8.31	Good
	2	2.79 ± 0.17	2.03					
	3	2.80 ± 0.17	2.05					
6. Loosen any restrictive clothing	1	2.68 ± 0.58	1.98	.304	2	.859	8.05	Good
	2	2.68 ± 0.58	2.01					
	3	2.68 ± 0.58	2.01					

Cut-off-point: 3-5 = Poor, 5.1-7 = Fair, 7.1-9 = Good

Discussion

The mean of age is 25.56 ± 8.78 ; most age 20-30-years ($n = 46$; 68.7%), followed by those who age 41-51-years ($n = 11$; 16.4%), and those who age 30-40-years ($n = 11$; 16.4%). This finding is lesser than that reported by ⁽⁸⁾, who reported that most of nurses aged 20-29-years ($n = 76$; 76.0%).

Concerning gender, most are males ($n = 43$; 64.2%) compared to females ($n = 24$; 35.8%). This finding is inconsistent with that of ⁽⁸⁾, who reported that the majority of nurses are females ($n = 83$; 83.0%).

Regarding educational level, most hold a diploma degree ($n = 47$; 70.1%), followed by those who are high school nursing graduates ($n = 19$; 28.4%), and one who holds a bachelor's degree ($n = 1$; 1.5%). This finding is inconsistent with that of ⁽⁸⁾, who reported that more than a third of nurses hold a bachelor's degree ($n = 36$; 36.0%).

The mean of years of working in nursing is 5.23 ± 6.31 ; most reported that they have been working in nursing for 1-5-years ($n = 46$; 68.7%), followed by those who have been working for 6-10-years ($n = 8$; 11.9%), those who have been working for each of 11-15-years and 16-20-years ($n = 6$; 9.0%) for each of them, and one who has been working for 21-30-years ($n = 1$; 1.5%).

With respect to the years of working in emergency department, the mean of years is 2.89 ± 3.46 ; the majority reported that they have been working therein for 1-5-years ($n = 56$; 83.6%), followed by those who have been working for 6-10-years ($n = 7$; 10.4%), and those who have been working for 11-15-years ($n = 4$; 6.0%). This finding is almost consistent with that of ⁽⁸⁾, who reported that most of nurses have less than a year in the current unit ($n = 60$; 60.0%).

Concerning nurses' practices related to febrile seizure - impaired level of consciousness, the items (Padding sides of bed or crib, supervising ambulation, supervising mealtime, having child wear protective helmet, precipitating event, occurrence of an aura, beginning and progression sequence, duration, type of movements, eye movements, tongue or lip biting, apnea or color changes, incontinence, level of consciousness, fall, and frequency). These finding reflect the unsatisfactory academic education they received which could enable to be well-prepared to provide quality care to manage the febrile seizure as urgent care at the pediatric emergency department.

Regarding the actions taken if seizure does occur, nurses' practices were poor in terms of protecting child from injury. This finding could be attributed as to the reality that the work overloads the nurses encounter could prevent them from keeping an eye on protecting the child from injury. With such a workload, nurses can think about fulfilling the main tasks in caring of children as urgent febrile seizure admitted to the pediatric emergency department.

Health personnel cannot educate families about fever management if they do not have sufficient knowledge related to the subject ⁽⁹⁾. For this reason, nurses should have sufficient knowledge related to fever management in order to educate families about fever management. Findings of the present study have been discussed with various studies. Although average scores of the pediatric nurses related to febrile convulsion and fever management both before and after the training were relatively high, it was seen that there were quite a lot of misinformation and incorrect applications. Results similar to those obtained in this study can

be seen in Sokun's study as well ⁽¹⁰⁾. In the study conducted with 31 emergency nurses, Considine and Brennan asked nurses about their opinions on childhood fever and evidence-based trainings were held, which led to a series of positive changes in opinions of emergency nurses regarding childhood fever ⁽¹¹⁾.

Nurses and nursing staff should lead by example, develop themselves and other staff, and influence the way care is given in a manner that is open and responds to individual needs. This includes supporting patients with both chronic and acute diarrhea. It is useful to highlight areas and techniques that are forgotten or not fully considered when helping patients cope with diarrhea. These include some contents practical issues relating to managing the condition, particularly for self-management approaches used by individuals who maintain a home-based care approach. The specialist nurse in inflammatory bowel disease is a knowledgeable, experienced and proficient practitioner in the specialty ⁽¹²⁾. Hernández et al, talks about the important role that nurses have in managing this disease process and also in providing patients with education, counselling, physical and emotional support ⁽¹³⁾.

Nurses as health workers can contribute in handling diarrhea according to their role, both in the service setting by providing parenteral fluids as a first step to rehydrating lost fluids so as to prevent hypovolemia, as well as in the community. Nurses can carry out their role in several ways, one of which is to provide education to parents regarding oral rehydration to treat diarrhea. ⁽¹⁴⁾.

It is believed that this data set can assist in hospital management, corroborating the best care practices. This is relevant, because at the bedside nurses can initiate, adjust or suspend interventions, according to the worsening, stabilization or improvement of the patient under their care, supported by evidence-based practice ⁽¹⁵⁾.

Conclusion

The study concluded that the nurses who work in pediatric emergency department have fair practices related to caring of common pediatric cases at emergency ward including (febrile seizure, diarrheas, poisoning, and ineffective breathing).

Recommendations

There is a need for the continuing nursing education and training courses to enhance nurses' practices related to managing urgent cases in pediatric emergency department. There is a need for the officials in the Ministry of Health to cooperate with their counterparts in the Ministry of Higher Education and Scientific Research to establish bridging program that qualify nurses with lower levels of education and practices to increased.

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