Prevention and Mitigation of Medical Error by Nursing Staff at Zliten Medical Center

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الوقاية والحد من الأخطاء الطبية من قبل طاقم التمريض في مركز زليتن الطبي

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Abstract

The study main objective is to ensure patient safety. Medical mistake has a negative impact on patient safety and is a significant health concern in healthcare systems. As essential members of the healthcare team, nurses are crucial in minimizing these mistakes and limiting other types of errors, such as making the correct responsible decisions. The study's objectives were to guarantee patient safety and raise the standard of healthcare, prevent and mitigate of the medical error. The response was 60 nursing staff from Al-Hayat Medical Hospital and Zliten Medical Center had their information gathered. The findings demonstrated that the department's lack of nursing staff contributed to patient neglect, with a high relative weight of response. Additionally, the nurse's work was neglected due to complex administrative procedures. The study concluded that Increasing the number of nurses on staff at the hospital while accounting for nursing enhance to ensure the work to the high level of quality. Increasing the sufficient number of nursing staff in the hospital. Facilitates complex administrative procedures while taking into account nursing scheduling so that work hours are appropriate to their ability.

Keywords: *Nursing mistakes, Mitigate, Patient, Prevention, Hospital .*

الملخص

الهدف الرئيسي للدراسة هو ضمان سلامة المريض. إن الخطأ الطبي له تأثير سلبي على سلامة المريض ويشكل مصدر قلق صحي كبير في أنظمة الرعاية الصحية. وباعتبارهم أعضاء أساسيين في فريق الرعاية الصحية، فإن الممرضات مهمات في تقليل هذه الأخطاء والحد من أنواع أخرى من الأخطاء، واتخاذ القرارات المسؤولة الصحيحة. كانت أهداف هذه الدراسة ضمان سلامة المريض ورفع مستوى الرعاية الصحية ومنع وتخفيف الخطأ الطبي. كانت الاستجابة 60 ممرض وممرضة من طاقم التمريض في مستشفى الحياة الطبي ومركز زليتن الطبي تم جمع معلوماتهم. أظهرت النتائج أن نقص طاقم التمريض في القسم ساهم في إهمال المرضى، مع وزن نسبي مرتفع للاستجابة. بالإضافة إلى ذلك، تم إهمال عمل الممرضة بسبب الإجراءات الإدارية المعقدة. وخلصت الدراسة إلى أن زيادة عدد الممرضات في طاقم العمل في المستشفى مع مراعاة التمريض يعزز ضمان العمل بمستوى عالٍ من الجودة. زيادة العدد الكافي من طاقم التمريض في المستشفى. تسهيل الإجراءات الإدارية المعقدة مع مراعاة جدولة التمريض بحيث تكون ساعات العمل مناسبة لقدراتهم.

الكلمات الدالة: أخطاء التمريض، الوقاية، المريض، الحد من الأخطاء، الرعاية الصحية.

1. Introduction

Safety in healthcare settings is a critical area that demands careful consideration and continuous improvement, ensuring patient safety is the primary goal of a healthcare facility (Morath & Turnbull, 2005). It is the duty of every healthcare professional involved in patient care to cooperate in administering medication safely without errors (Organization, 2017). Medication errors can occur in every care facility (Elliott et al., 2018). Health care at any stage, from prescription to management, can have serious consequences for patients (AbdulRaheem, 2023). Nurses, as integral members of the health care team, play a vital role in preventing these nursing errors and mitigating errors that include responsible decisions, omissions, or erroneous actions, resulting in limitations or negative consequences for patients (Lundin Gurné et al., 2023). Optimal and standard integration of medication safety principles and practices comes from leadership and nursing knowledge of the cause, how to avoid medication errors, and what leads to medication errors (Giri et al., 2023). Medical errors can be classified based on their content or what went wrong (ex: medication, surgery, transfusion, healthcare-associated infection)·(Stucky et al., 2024). Where it occurred (e.g., pediatric ward, emergency room, intensive care unit, operating room), who was at fault (e.g., physician, pharmacist, nurse), or both (AlTurkistani et al., 2023). Patient care and rehabilitation are not the only factors that determine the success of nursing services. Examining the effectiveness of nursing services is an important tactic that seeks to ascertain and ensure that patient care has the greatest possible benefits. The effectiveness of providing these services is not solely governed by the knowledge and skills of medical professionals (Guitar et al., 2023). Measuring the efficacy of nursing services is becoming more and more crucial in a complex and dynamic healthcare setting. Advances in medical technology, the evolving nature of the nurse's role, and changes in patients' needs and expectations necessitate a review of the effectiveness of

the care provided (Conroy et al., 2023). Analyzing the effectiveness of nursing services involves more than just patient clinical outcomes; it also includes other pertinent factors like patient satisfaction, safe and ethical service delivery, and the effective use of resources (Bhati et al., 2023). Substantial drug interactions and major medication errors; the prescription phase had the most errors (Escriva Gracia et al., 2021).

1.1. Problem of the study

- High frequency level of medical error made by nursing.
- Error is negative behavior resulting from negligence, which can lead to miss diagnoses.
- Some errors lead to the patient suffering a permanent disability or losing his life.

1.2. Objective of the study

- Preventing error, restoring the patient to his normal condition, and mitigate the severity of pain.
- To determine the errors to prevent their recurrence and guarantee patient safety.
- Improving the quality of health service.

2. Materials & Methods

A questionnaire was created for this study that included the number of nurses in each department at Zliten Medical Center and Al-Hayat Hospital. It also identified the nursing manner that should be used while dealing with patients to prevent mistakes that may be made accidentally or purposely. SPSS software, version 25, was used to evaluate the data from the collection of 60 male and female nurses, and the results were displayed.

2.1. Research Design

The research design combines descriptive analysis

2.2. Study Population and Sampled

The research sample was 60 nurses from the nursing staff at Zliten Medical Center and private clinic (Al-Hayat Hospital), where randomly selected nurse about nursing errors.

2.2.1. Side Title:

Prevention and mitigation of medical error by nursing staff at Zliten Medical Center

3. Results & Discussion

Q1/ Do nursing errors stem from prescription abbreviations?

Most of responders confirmed that, at a rate of 70%, prescription abbreviations result in medical errors (Table 1). This is one of the reason of medical error. This result was agreed with (Escriva Gracia et al., 2021) the prescription phase had the most errors.

Table 1. Nursing errors stem from prescription abbreviations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	18	30.0	30.0	30.0
	YES	42	70.0	70.0	100.0
	Total	60	100.0	100.0	

Q2/ During each procedure I would like to record general information (age, gender, and triple name)

The responses of 96.7 % of patients had their name, age, and gender recorded at the time of each procedure, this finding fits into the category of avoiding, mitigating, and preventing medical errors (Table 2). Also Gerrish & Lacey (2010), the research process in nursing. John Wiley & Sons. as agree with the current study, name, age, and gender must recorded at the time of each procedure.

Table 2. During each procedure I would like to record general information (age, gender, and triple name)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	2	3.3	3.3	3.3
	YES	58	96.7	96.7	100.0
	Total	60	100.0	100.0	

Q3/ One of the reasons for medical errors is burnout?

The findings indicated that 85% of medical errors are caused by exhaustion (Table 3). The study of Manji et al. (2021). Are maladaptive brain changes the reason for burnout and medical error. was agreed with this point maladaptive brain changes the reason for burnout and medical error

Table 3. One of the reasons for medical errors is burnout?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	9	15.0	15.0	15.0
	YES	51	85.0	85.0	100.0
	Total	60	100.0	100.0	

Q4/ Patient neglect is caused by the department's lack of nursing staff?

At 81.7 % of the responses, the majority of respondents agreed that the department's nursing staffing shortage was the reason for patient neglect (Table 4). The study Reader & Gillespie (2013), was agreed of Patient neglect in healthcare institutions: a systematic review and conceptual model.

Table 4. Patient neglect is caused by the department's lack of nursing staff?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	11	18.3	18.3	18.3
	YES	49	81.7	81.7	100.0
	Total	60	100.0	100.0	

Q5/ If I make a medical mistake I accept the consequences?

Based on the responses, 83.3 % of respondents said they would accept the penalties in the event of a medical error (Table 5). This suggests that accepting the consequences is crucial to mitigate and prevent medical errors.

Table 5. If I make a medical mistake I accept the consequences?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	10	16.7	16.7	16.7
	YES	50	83.3	83.3	100.0
	Total	60	100.0	100.0	

Q6/ I will address a nursing error regardless of the outcome if I see one?

75% of nurses address nursing errors, no matter how they turn out, and that this helps hospitals' nursing staff advance and become better (Table 6). Also the study of Meurier (2000), understanding the nature of errors in nursing: using a model to analyses critical incident reports of errors which had resulted in an adverse or potentially adverse event agreed with current study

Table 6. I will address a nursing error regardless of the outcome if I see one?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	15	25.0	25.0	25.0
	YES	45	75.0	75.0	100.0
	Total	60	100.0	100.0	

Q7/ Do you alter the doctor's prescription and administer the medication at a different dosage?

The results showed that 61.7 % of nurses followed the doctor's prescription exactly when giving out medication, indicating that this practice does not result in medical errors (Table 7). Study of Jaradat et al. (2024) knowledge, attitudes and practices regarding medication splitting and crushing among the general public in Jordan was agreed with this study.

Table 7. I alter the doctor's prescription and administer the medication at a different dosage?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	37	61.7	61.7	61.7
	YES	23	38.3	38.3	100.0
	Total	60	100.0	100.0	

4. Conclusion

The medical mistakes facing hospital nurses can be summarized in the following;

- Patient neglect was caused by the unavailability of nursing staff in the department, with a very high relative weight of responses.
- Medical mistakes caused by inexperienced nurses have an adverse effect on the patient, with a high relative weight of responses.
- Intricate administrative procedures reason the nurse to neglect his work, with a high relative weight of responses.
- Burnout is one of the reasons of medical mistakes, with a very high relative weight of responses.

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