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Assessment of Barriers to Voluntary Reporting Of Medication Errors

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Abstract
Medication errors are a great threat to patient safety and a huge challenge to health care. Nurses – who commonly are last on the medication chain, should report errors when detected, regardless of whom and at what point in the medication chain the error had occurred. This study is aimed at assessing the barriers to voluntary reporting of medication errors among nurses. Four hundred and sixteen (416) nurses were used in the study to assess the barrier to voluntary reporting of medication errors. It was found that though all the participants claimed to have reported their medication errors, but, 90.6% think it is important to report medication errors formally, while 84.4% of those that claim formal reporting is good was found to have reported medication errors verbally to charge nurse on duty. Factors such as personal factors; mainly fear of the outcome of reporting, and administrators focusing on the individual errors rather than system factors (95.2%) were found. When there is blame culture, medication errors will not be formally reported. When authorities do not know about medication errors, preventing future medication errors will be hindered. Therefore, there should be root cause analysis of the medication errors and the reporting process rather than blaming the individuals for the errors made. Strategies on improving reporting that is void of fear and blame should be developed. There should be adequate continuous education on the medication among those involved in the process, to improve medication knowledge and skill.

Keywords: *Medication errors, reporting, barriers, assessment.*

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I. Introduction

Medication is a core component of a patient's healthcare. It is required either to treat the disease or to alleviate the symptoms (1). A medication error is an unintended failure in the drug treatment process that leads to harm or has the potential to cause harm to the patient (2). According to the World Health Organisation [WHO] (3), medication errors occur during the medication process either from omission or commission. Globally, these errors create serious medical consequences for patients (4-7).

In February 2018, the prevalence of medication errors in England was estimated as 237 million per annum (8). Unsafe medication practices and errors are a leading cause of avoidable harm in health care globally; and the cost associated with medication errors has been estimated at $42 billion annually, not counting lost wages, productivity or health care cost (9). Studies revealed medication errors are a leading cause of injury and avoidable harm in health care systems globally generating costs that have been estimated at 42 billion USD annually (10-12).

In the medication chain, the administration stage is known to be more prone to errors (12). Medication administration requires tactful, knowledgeable and skillful practice. Medication errors can only occur when there are weaknesses in the medication chain system. Human related factors (e.g. poor working conditions, fatigue, poor staffing) that can affect prescribing, storage, preparation, dispensing, administration and monitoring are the major causes of medication errors. Other circumstantial factors associated with medication errors include: inconsistency in the definition of medication errors, complex medication delivery system, healthcare policies, communication and technology (13). Nurses are part of the final stage of medication process and are responsible for administering medication to the patient. Nurses spend most of their time in medication administration and as the front-line staff, it is their responsibility to report any detected medication errors, regardless of the stage in the medication process it occurred (Udi et al., 2019).

According to the WHO (9), any investment that improves patient safety can lead to significant financial savings and more importantly, better patient outcome. Reporting medication errors is therefore a significant

strategy to ensure patient safety (14). Notwithstanding, many medication errors are unreported and those reported are mostly done using the wrong approach (15). Udi et al (16) opined that significant effort through research have been done to enhance medication errors reporting. Consequently, Hartnell et al. (17) opined that the main factor militating against voluntary report of medication errors is fear of the consequences of reporting. Same study revealed fear of the reaction of the hospital managers/authorities, fear of negative attitude from patients, fear of blame and punishment, fear of license revocation and fear of job loss. Variations in reporting rates in the literature is related to inconsistency in the approach to reporting medication error and lack of feedback (18).

Whether nurses are the source of errors or not, professional responsibility demand that they report any type of error, being a front-line personnel and also the last person to ensure patient safety (19). To encourage medication error reporting among nurses, different approaches are recommended (14). Bearing in mind the documented barriers to voluntary reporting of medication errors, this study is designed to investigate locally the barriers to voluntary reporting of medication errors among nurses in a tertiary hospital in the south-south region of Nigeria.

II. Aim Of The Study

The study is aimed at assessing barriers to voluntary reporting of medication errors among nurses.

III. Materials And Method

This is a cross-sectional study carried out in the University of Benin Teaching Hospital, in the south-south region of Nigeria. The hospital has 712 nurses from which 416 were recruited for the study. Those included were nurses directly involved in regular drug administration with at least 12 months experience in medication administration. These were recruited from various units including emergency, medical, surgical, pediatric, obstetrics and gynecology. Data collection was done within three week of ethical approval using structured questionnaires and the three shifts were covered (morning, afternoon and night shift). The questionnaire contained information on questions on nursing practice and barrier to voluntary reporting of medication error. The confidentiality of each participant was ensured and guarantee provided against any harm by ensuring anonymity. Data analysis was performed using Statistical Package for the Social Sciences (SPSS).

IV. Results

From the data analyzed, it was revealed that various factors such as personal factors, reporting process and administrator factors hindered voluntary reporting of medication errors. All the participants (n=416) claimed they reported their medication errors as well as those they noticed were made by others. Out of the 416 nurses, 90.6% considered it a necessity to formally report medication errors, but, majority (84.4%) verbally reported their medication errors or those noticed to have been made by others to the charge nurse on duty.

Findings from the study showed that major factor responsible for nondisclosure of medication error is fear. 60.6% admitted to fear of being blamed for medication error made, 69.9% reported fear of being seen as incompetent while 70.1% reported fear of litigation. The study revealed that 95.2% of the participants reported blame to the individual from the administrators for the medication errors instead of system factors leading to the medication errors. Lack of a clear policy on reporting medication error (72.4%) and absence of positive feedback after reporting medication errors (78.8%) were also reported.

V. Discussion

Medication is a core component of a patient's healthcare. Medication errors can occur when there are weaknesses in the medication chain system. Reporting medication errors is a significant strategy to ensure patient safety (14). Nurses are part of the final stage of medication process and are responsible for administering medication to the patient. Nurses spend most of their time in medication administration and as the front-line staff, it is their responsibility to report any detected medication errors, regardless of the stage in the medication process it occurred (16).

This study found that all participants (n=416) reported to have reported the medication errors they made and those they observed made by others. Though, all the participants claim to report medication errors, majority of them did not report using the appropriate method of reporting. This is at variance to previous studies on this subject matter. Udi et al. (16) discovered that 75.3% reported their medication errors; Abebaw et al. (20) reported 57.4% as the proportion of the nurses who reported medication errors while Zaree, et al (21) noted that a lesser proportion (29%) of participating nurses reported medication errors. According to Ilesanmi, Okojie and Ojerinde (15), 162 (64.8%) (n=286) nurses admitted to have committed medication errors; of which 137 (84.4%) reported the errors. Following the system reports from different studies, it worthy to commend the nurses in this study. Continuous education should be encouraged to enhance adequate knowledge and skill for good quality practice.

While it is very important to report medication error, the channel of reporting is more important in preventing more medication errors from happening. In this study, majority of the nurses (90.6%) believe medication errors be formally reported while 84.4% reported to the charge nurse on duty instead of making a formal report. This agrees with a previous study by Abdel-Latif (22) where all their participants agreed that they have a professional obligation and moral responsibility to report medication errors to authorities, and 47.4% of healthcare professionals were willing to submit medication error reports to hospital authorities. Where medication errors are not formally reported, it is difficult to prevent reoccurrence of those errors made.

Results from the study revealed that nurses were willing to formally report medication errors, but some personal and administrative factors were the barriers to voluntary reporting. This study discovered fear as the major barrier to voluntary reporting of medication errors; fear of being blamed (60.6%), fear of being seen as incompetent (68.8%), fear of litigation (70.1%) and change in the attitude of patients and their relatives when they know the medication errors were made or reported by them. This is in line with Hartnell et al. (17) which noted fear of reprisal from management and fear of exposure to malpractice suits.

In addition, administrative errors such as focusing on individual error instead of system factors leading to medication errors was the main factor identified by the majority (95.2%). There were no previous studies to compare this finding. However, Reason's model of Human error opined that when analyzing a prevention-based framework, human and systemic factors should be considered (23). Most problems in organizations are complicated, ill-defined and interactive with some factors (24). Besides, there are important facts about human errors that have been overlooked; best people could do the worst errors. Administrators should strategize means to prevent further medication errors like high reliability organizations that recognize that human variability is a force to harness in averting errors, and they work hard to focus on that variability (23). Therefore, Rogers et al. (25) suggest that when medication errors occur, the important issue is not to blame individuals for making the errors, but a root cause analysis of how and why the medication error occurred should be investigated and strategies to prevent further medication errors made.

In conclusion, medication errors happen when there is weakness in the medication chain. It is difficult to completely eliminate medication error in healthcare practice. But, detecting, reporting and preventing further medication errors are crucial steps to ensuring patients' safety and health outcome. Where there is blame culture, medication errors will not be formally reported. When authorities do not know about medication errors, preventing future medication errors will be hindered. Therefore, there should be root cause analysis of the medication errors and the reporting process rather than blaming the individuals for the errors made. Strategies on improving reporting that is void of fear and blame should be developed. There should be adequate continuous education on the medication among those involved in the process, to improve medication knowledge and skill.

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APPENDIX

Table 1. Barriers to Voluntary Reporting Medication Errors

S/N	BARRIERS TO REPORTING MEDICATION ERORS			
A	**REPORTING PROCESS**	**YES**	**NO**	**TOTAL**
1.	I think medication error is necessary to report formally	377 (90.6%)	39 (9.4%)	416 (100)%
2.	I reported medication error I made and those noticed to have been made by others	416 (100%)	0 (0%)	416 (100%)
3.	I verbally reported to the charge nurse on duty	351 (84.4%)	65 (15.6%)	416 (100%)
4.	Too much time to contact physician or pharmacists to correct the detected medication errors	247 (57.4%)	169 (42.6%)	416 (100%)
B	**PERSONAL FACTORS**	**YES**	**NO**	**TOTAL**
1.	Fear of being blamed for the medication error	252 (60.6%)	164 (39.4%)	416 (100%)
2.	Fear of patients and relatives attitude	286 (68.8%)	130 (31.2%)	416 (100%)
3.	Fear of being seen as incompetent	291 (69.9%)	125 (30.1%)	416 (100%)
4.	Fear of litigation	292 (70.1%)	124 (29.9%)	416 (100%)
C	**ADMINISTRATIVE FACTOR**	**YES**	**NO**	**TOTAL**
1.	No clear policy on medication error reporting	301 (72.4%)	115 (27.6%)	416 (100%)
2.	No positive feedback after reporting medication errors	328 (78.8%)	88 (21.2%)	416 (100%)
3.	They focus on individual error instead of system factors leading to medication errors	396 (95.2%)	20 (4.8%)	416 (100%)