ISSN 2091-2889 (Online)
ISSN 2091-2412 (Print)

Journal of Chitwan Medical College 2016; 6(16): 17-20
Available online at: www.jcmc.cmc.edu.np

ORIGINAL RESEARCH ARTICLE

ORAL MEDICATION ADMINISTRATION PRACTICE OF NURSES IN CHITWAN MEDICAL COLLEGE

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ABSTRACT

Administering medication is high risk activity because one third of the errors occur during the nurse administration phase. Objective of the study was to find out the nurses practice of administering medicine to the patients. For that onduty nursing supervisors were observed the activities of nurses during administering medicines to the patients at 6 pm, 10 pm and 6 am of following day. Out of 52 nurses, only 5.76% nurses asked patients about the history of allergy and 86.53% asked patients to state their name for identification, 55.76% of nurses compared label of drug with cardex while withdrawing from the stock, 38.46% while pouring and 40.38% before replacing the drug on stock., 13.46% nurse explained purpose of drug to patient, 94.23% were check expiry date of drug, 46.15% stayed with patient till swallowing of drug. This study revealed, 68.42% nurses used measuring cup for accurate measurement of the liquid drug. Similarly, transparency of the syrup was checked by the 50.0% of nurses and 73.60 % of nurses shook the drug(suspension) before pouring on cup. As nurses were poorly adhere to the medication administration procedure, development of policy and procedure with ongoing education and monitoring of practice on safe medication is recommended.

Key words: *Administration, Medication, Nurse, Practice.*

DOI: http://dx.doi.org/10.3126/jcmc.v6i2.16680

INTRODUCTION

The administration of a medicine is a common but important clinical procedure. Administering medication is high risk activity because one third of the errors occur during the nurse administration phase.[1] It is the manner in which a medicine is administered that will determine to some extent whether or not the patient gains any clinical benefit, and whether they suffer any adverse effect from their medicines.[2] However Nursing Interventions Classification (NIC), defined medication administration as preparing, giving and evaluating effectiveness of prescription and nonprescription medications.[3]

Medication administration is complex multistep process that encompasses, prescribing, transcribing, dispensing, administering drug and monitoring responses.[4] It is more than a simple psychomotor task. It reflects a complex interaction of a large number of specific decisions and actions[5] and involves skillful technique and consideration of the patients' development, health status and safety. The nurse administering medication needs knowledge about drugs including drugs name, preparation, classifications and adverse effects and physiological factors that affect drug actions.[6] Administering medication safely requires an understanding of legal aspects of health care, pharmacology, pharmacokinetics, the life science, human anatomy and mathematics[7] because a study revealed, the main causes of medication administration errors were lack of calculation, competency and poor adherence to protocol, distractions and time pressures.[8]

Medicine can be administered by the different routes such as parental, oral, tropical and pulmonary. Among all, oral route is the most frequently used route of drug administration and is the most convenient and economic route. In oral route, patient's needs to swallow drug and drug given orally are intended for

absorption in the stomach and small intestine.[6]

In hospital, nurses are primarariy responsible for providing medicine to the patient. A administering medication is a high risk activity because One third of the error occurs during the nurse administration phase[1] as once the medicine has been given, there is no way to intercept it. Therefore, errors in medication administration is more crucial than error in other stages of medication process (prescribing, transcribing, dispensing and in monitoring) as 84% of these errors go un-intercepted[9] and it may cause serious harm to patient.[10] Thus, safe administration of medication is very important to nurse, doctor, administrator, patient and public and the entire health care system.[5] Administering medicines to the patients according to the defined procedure and policy reduce the risk of error, and assure the patients safety. Therefore this study aims at finding out the nurses' practice of administering medicine to the patients by oral route.

OBJECTIVE

To find out the oral medication administration practice of nurses in CMC Teaching Hospital.

METHODOLOGY

This observational study was carried out at Chitwan Medical College (CMC) on Baishakha, 2069. Observation check list was used to collect the data. Night nursing supervisors were mobilized for observing the activities of nurses while administering medication at 6 pm, 10 pm and 6 am of following day. Nurses working in Surgery, Medicine, Orthopaedics and Gynaecology wards were included in study. Total 52 nurses' practice were observed. Frequency and percentage was used to analysed the data.

RESULT

Out of 52 nurses, 17.30 % nurses checked patient's ability to swallow medicine, 11.53% asked history of vomiting /diarrhea or NPO and only 5.76% nurses asked history of allergy and non of them checked bowel sound before administering drug. Similarly, during administration of drug, hand washing was performed by 48.07% nurses and 86.53% asked patients to state their name for identification (table 1). While administering liquid medicine, 73.60 % nurses shook medicine before pouring in measuring cup, 50% were observed its transparency and 68.42% were used caliberated medicine cup for measurement. Furthermore, after administering medicines to the patients, 94.23% were immeditely signed on Cardex however patients response to medicine (after 30 minutes of administration) was assessed by 11.53% of nurses and hand hygiene was performed by 44.23% of nurses.

Table 1 Steps Performed by Nurses during Administration of Medicine (n=52)

Steps	Frequency	Percentage
Perform hand washing	25	48.07
Prepare medication of one patient at a time	50	96.15
Compare label of drug with Cardex:		
• While withdrawing from stock (drawer)	29	55.76
• Before pouring on container	20	38.46
• Before replacing to stock (drawer)	21	40.38
Check expiry date of drug	49	94.23
Perform dose calculation	41	78.84
Pour tablet in paper bag / medicine cup	22	42.30
Ask patient to state his/her name	45	86.53
Explain purpose of drug to patient	07	13.46
Place patient in sitting/side lying	35	67.30
Give one medicine at a time	41	78.84
Stay with patient until swallowing of drug	24	46.15

DISCUSSION

The distribution and administration of medication represents a major duty of hospital-based nurses.

This study revealed, out of 52, only 5.76% nurses asked patients about the history of allergy to that drug. The reason behind it was either, they think that the drug couldn't cause allergy or they may have asked during previous administration. However, a study conducted in Public Hospital of Soudi Arabia found 22% of nurses reported that the drug was given to known allergy patients.5 Only 11.53% nurses asked patients about the vomiting and diarrhea before administering the drug. None of them auscultated the bowel sound, as it is crucial for the patients with major abdominal surgery.

The "rights" of medication administration include right patient, right drug, right time, right route, and right dose.[11] These rights are critical for nurses. Accurate demographic information (the "right patient") is the first of the "five rights" whereas in this study 86.53% of nurses asked patients to state his/her name. This study found, 55.76% of nurses compared label of drug with cardex while withdrawing from the stock, 38.46% while pouring and 40.38% before replacing the drug on stock. These three checks are essential to ensure the right drug of medication administration because administration of wrong drug to a patient is second most common error among the medication errors.[12]

This study revealed, 68.42% nurses used measuring cup for accurate measurement of the liquid drug, and 60.05% held it at eye level while pouring. Similarly, transparency of the syrup was checked by the 50.0% of nurses and 73.60 % of nurses shook the drug (suspension) before pouring on cup, because failure to shake leads to low dose or overdose depending upon the drug product and elapsed time since the last use.

Hand hygiene is most crucial step of medication administration. This study showed only 48.07 % nurse performed hand hygiene before administration of drug and 44.23% after the procedure. Furthermore 42.30% nurses used paper bag or medicine cup for pouring medicine and 46.15% nurses stayed with patient untill they swallowed medicine. After administration of drug 11.53% nurses assessed the patient again for monitoring the effect of drug administered.

Patients with impaired swallowing are always at risk of aspiration[7] though it was assessed by only 17.30% of nurses and similarly, patient having medicines in an upright and side lying position, helps prevent the patient from choking and aspiration[6] however, 67.30% of nurses placed patient in sitting/side lying position during administration.

CONCLUSION

This study concludes that nurses are poorly adhere to procedural protocol of the medication administration, which incease the risk of medication errors by the nurse and compromise the patient safety. Thus, for the prevention of errors, organization needs to develop medication administration policy, procedure and protocol along with provision of continue orientation, and supervision to nursing staff. Further study can be done on large setting and on prevalence of medication error and its associated factors.

AKNOWLEDGEMENT

The authors would like to acknowledge the invaluable assistance of all Nursing Officers CMC Teaching Hospital for data collection, Dr. Anee in the preparation of this manuscript,

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