



## **Full Length Research Article**

### **REGISTERED NURSES' PERCEPTION OF THEIR PROFESSIONAL ROLE REGARDING MEDICATION MANAGEMENT IN FEDERAL MEDICAL CENTRE YENAGOA BAYELSA STATE**

**\*OPIAH, Margaret, M., FRANK, Maureen, D., OSAJI, Teresa A. and OTOBO, Mezino**

Faculty of Nursing, Niger Delta University, Wilberforce Island, Bayelsa State

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#### **ABSTRACT**

The study determined the registered nurses' perception of their professional role regarding medication management in federal medical centre Yenagoa Bayelsa state. Two (2) research questions based on the two (2) objectives were formulated. Descriptive survey research design was adopted. The sample for the study consisted of 170 nurses; instrument used for data collection was a self structured questionnaire which was validated by experts in the field. The reliability of the instrument was established through test re-test method which yielded a high positive correlation of 0.89. The data was collected and analyzed using descriptive statistics of frequency and percentages. Based on the findings, the study revealed that monitoring for desirable and unwanted side effect, 160(97.0%); providing patient medication education, 96(58.2%); were among the role of nurses in medication management. Wrong dosage, 120(72.2%); administering medication to wrong patient 140 (84.8%); unwanted side effects 80(48.4%) are among the errors that could occur as a result of poor medication management. There is a significant relationship between nurses' years of experience and perception of their professional role regarding medication management  $P(0.013) < 0.05$ . Hence, the null hypothesis was rejected and the alternative ( $H_0$ ) accepted. It was concluded that nurses have good perception of their professional roles regarding medication management. Some of the recommendations are that nurses must take measures to develop and maintain the competence necessary for professional practice and that nurses are obliged to report any error or omission in practice that may jeopardize patient safety.

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#### **INTRODUCTION**

Medications are chemical substances that will potentially affect the physiological, emotion, psychological or mental condition of the patient and thus requires the full concentration of the nurse responsible for the role at any given time, (Biron, Lavoie-Trembley and Loiselle, 2009). The National Prescribing Centre (2008) stated that when first described in 2002, medication management encompass clinical assessment, monitoring, and review in individual patients, medicine delivery services, review of repeat prescribing systems, clinical audit, health education, risk management, disease prevention and formularies and guidelines. Medication management is defined as the facilitation of safe and effective use of prescription and over-the-counter medications (Guidance to Nurses and Midwives on Medication Management, 2007). Medication management also involves a comprehensive intervention which encompasses the

knowledge of nurses and midwives (and that of other health care professionals) and the activities that are performed to assist the patient in achieving the greatest benefit and best outcomes involving medications. The roles of clinical nurses in medication management are complex and multifaceted and these roles include: administering medication safely and efficiently, assessing and monitoring for desirable and unwanted effects, and providing patient education, (Manias and Bullock 2002). Medication management is among the most frequent activities performed by nurses, hence, nurses need adequate medication competence to provide safe and effective medication management which is an important component of their responsibilities, (Armitage and Knapman 2003; Brady, Malone, and Fleming 2009). Medication management activities performed by the nurse/midwife may vary, depending upon the individual patient situation, the health care setting, its policies and protocols and the scope of practice of the nurse/midwife. Each nurse/midwife is expected to develop and maintain competence with regard to all aspects of medication management, ensuring that her/his knowledge, skills and clinical practice are up to date. The activities of medication management require that the nurse/midwife is

**\*Corresponding author: OPIAH, Margaret**

Faculty of Nursing, Niger Delta University, Wilberforce Island, Bayelsa State

accountable to the patient, the public, the regulatory body, her/his employer and any relevant supervisory authority. This relates to both actions and omissions. Guidance to Nurses and Midwives on Medication Management (2007) stated that the nurse/midwife should have knowledge of the relevant statutes and legislation regarding the practices of prescribing, dispensing, storing, supplying and administering scheduled medical products. This includes controlled, prescription-only and over-the counter medications. There is an obligation to practice according to the legislation governing nursing and midwifery practice, and the current standards and policies of regulatory bodies and health service providers. Nurses and midwives should be aware of their legal and professional accountability with regard to medication management.

The process of preventing medication errors are complex and it involves several healthcare disciplines. Nurses, pharmacists and physicians are all involved in the process of medication management (prescription, preparing, and/or administering) and each of these individuals could contribute to the potential for error. Nurses, in the majority of cases, represent the last safety check in the chain of medication management and therefore, are the final safeguard of patient wellbeing. This process requires vigilance as well as consistent double checking throughout the medication management process. Cima and Clarke (2012) stated that members of any discipline can make mistakes in the chain of steps in the medication management process; but nurses who are at the "sharp end" of the process have a unique role in preventing medication errors. They are usually the last individuals who stand between the medication and the patient. Guidance to Nurses and Midwives on Medication Management (2007) noted that the use of right patient, right drug, right dose, right route and right time among other medication rights should minimize the risk of medication error to patient. Hence, this has brought about the need to assess registered Nurses perception of their professional role regarding medication management in Federal Medical Centre, Yenagoa Bayelsa State.

### Objective of the Study

The specific objectives of this study are to:

- Determine nurses' perception of their professional role regarding medication management in Federal Medical Centre Yenagoa.
- Identify the errors that could occur as a result of poor medication management by nurses in Federal Medical Centre Yenagoa Bayelsa State.

### Research Questions

- What are the perceptions of Nurses of their professional role regarding medication management in Federal Medical Centre Yenagoa Bayelsa State?
- What are the errors that could occur as a result of poor medication management by Nurses in Federal Medical Centre Yenagoa Bayelsa State?

### Research Hypothesis

There is no significant relationship between Nurses years of experience and perception of their professional role regarding medication management in Federal Medical Centre Yenagoa Bayelsa State.

## MATERIALS AND METHODS

A descriptive non experimental survey was used to determine registered Nurses' perception of their professional role regarding medication management in Federal Medical Centre Yenagoa Bayelsa State. This study was carried out in Federal Medical Centre Yenagoa Bayelsa. It is a tertiary institution of health that serves both academic and health care delivery purposes. The facility started in 1999, has 331 nurses. It comprises of 12 wards; accident and emergency ward, pediatric ward, children clinic, labour ward, special care baby unit, surgical ward, medical ward, orthopedic ward, outpatient clinic, ear, nose and eye clinic. The target population is registered Nurses working in Federal Medical Centre Yenagoa Bayelsa State as at the time of study. A stratified sampling technique was used to obtain a sample size of 170 from 331 nurses. A stratified sampling technique is a probability sampling technique in which the researcher divides the entire target population into different subgroups, or strata, and selects the final subjects proportionately from the different strata. The sample size of 170 was gotten by 50% of the population from the various strata except the positions of the DDNS, ADNS and PMO that had just one person.

DDNS = 1; ADNS = 1; CNO = 40; ACNO = 40; PNO = 14; PMO = 1; SNO = 31 NO I = 36  
NO II = 167

Total number of nurses = 331

Calculation for the sample size of 170 is shown below:

$CNO = 40 \div 100 \times 50 = 20$   
 $ACNO = 40 \div 100 \times 50 = 20$   
 $PNO = 14 \div 100 \times 50 = 7$   
 $SNO = 31 \div 100 \times 50 = 16$   
 $NO I = 36 \div 100 \times 50 = 18$   
 $NO II = 167 \div 100 \times 50 = 86$   
 DDNS = 1; ADNS = 1; and PMO = 1  
 Total sample size = 170

The instrument for data collection was a self-structured questionnaire. Which consist three (3) sections. Section A consisted of five (5) items on socio-demographic variables of respondents, Section B had nine(9) items eliciting information on nurses' perception of their professional role regarding medication management, and Section C consisted six(6) items eliciting information on errors that could occur as a result of poor medication management. The self-structured questionnaire was validated by experts in the subject matter who confirmed the face and content validity of research instrument. Reliability of the instrument was ascertained by using test retest method, 10 copies of the questionnaire were administered to 10 staff of Niger Delta University Teaching Hospital Okolobri, Bayelsa state and re-administered after interval of two weeks. The data collected on the two administrations were analyzed using Spearman Rank Correlation Co-efficient which yielded high correlation of 0.89 which was considered adequate for the study. The researchers recruited four research assistants after informing them about the purpose of the study. The instrument was administered directly to the respondents by the researchers and the research assistants. 170 copies of questionnaires were distributed and 165 copies were retrieved, which gave 97.1% return rate. The other copies were either: not properly filled, not filled completely or not returned. Data collected was entered into the

computer using Statistical package for social sciences (SPSS) version 20. Both descriptive and inferential statistics were used to analyze the data collected. Pearson chi-square( $X^2$ ) was also used to establish statistical relationship between the variables of interest. Consent was obtained from the ethical committee of the hospital used for the study. The purpose of the study was explained to the respondents who were also assured of the confidentiality of all information provided and respondent's anonymity maintained.

## RESULT

Table 1 showed that majority of the respondents 40(24.2%) were between the ages of 26-30 years, 35(21.2%) were between the ages of 21-25 years, 30(18.2%) were between the ages of 36-40 years, 29(17.6%) were between the ages of 31-35 years, 25(15.2%) were between the ages of 41-45 years and 6(3.6%) were between the ages of 46 and above. Majority of the respondents 103(62.4%) were females and 62(37.6%) were males. Majority of the respondents 105(63.6%) were married, 55(33.3%) were single and 5(3.0%) were widowed. Majority of the respondents 73(44.2%) were NO II, 35(21.2%) were sCNO, 28(17.0%) were ACNO, 14(8.5%) were NO I, 12(7.3%) were SNO and 3(1.8%) were PNO. Majority of the respondents 70(42.4%) 1-5 years of experience, 38(23.0%) had 16 and above years of experience, 29(17.6%) had 6-10 years of experience and 28(17.0%) had 11-15 years of experience.

**Table 1. Socio-demographic characteristics of respondents (n=165)**

Variable	Frequency (N)	Percentage (%)
Age		
21-25	35	21.2
26-30	40	24.2
31-35	29	17.6
36-40	30	18.2
41-45	25	15.2
46 and above	6	3.6
Gender		
Male	62	37.6
Female	103	62.4
Marital status		
Single	55	33.3
Married	105	63.6
Divorced	0	0.0
Widowed	5	3.0
Position		
DDNS	0	0.0
ADNS	0	0.0
CNO	35	21.2
ACNO	28	17.0
PNO	3	1.8
PMO	0	0.0
SNO	12	7.3
NO I	14	8.4
NO II	73	44.2
Years of experience		
1-5	70	42.4
6-10	29	17.6
11-15	28	17.0
16 and above	38	23.0

Table 2 showed that majority of the respondents 105(63.4%) agreed that nurses' role in medication management involves administration of medication safely; 160(97.0%) strongly agreed that it involves monitoring for desirable and unwanted side effect; 96(58.2%) agreed that it involves providing patient medication education; 160(97.0%) agreed that it involves

double checking of medication. Majority of the respondents 96(58.2%) strongly agreed that administration of right medication is a role of nurses in medication management; 118(71.5%) strongly agreed that nurses' role in medication management involves medication calculation; 96(58.2%) strongly agreed that it involves checking of medication constituent while 22(13.3%) strongly disagree. Majority of the respondents 160(97.0%) agreed that nurses' role in medication management involves the right dosage; 160(97.0%) agreed that nurses' role in medication management involves proper documentation. Table 3 showed various responses to errors that could occur as a result of poor medication management: majority of the respondents 120(72.7%) agreed to administration of wrong dosage and 45(27.3%) strongly agreed to administration of wrong dosage; 140(84.8%) agreed to administering medication to wrong patient while 25(15.2%) strongly agreed to administering wrong medication to patient; 80(48.5%) strongly agreed to unwanted side effects while 10(6.1%) strongly disagreed. Majority of the respondents 140(84.8%) agreed to wrong route while 25(15.2%) strongly agreed to wrong route. Sixty nine (69) (41.8%) strongly agreed to wrong constituent while 22(13.3%) Strongly disagree. Majority of the respondents 70(42.4%) agreed to death of patient, 44(26.7%) Strongly disagree. Table 4 showed that there was a significant relationship between nurses' years of experience and perception of their professional role regarding medication management with  $P(0.013) < 0.05$ . Hence, the null hypothesis, 'There is no significant relationship between Nurses years of experience and perception of their professional role regarding medication management,' was rejected and the alternate accepted.

## DISCUSSION OF FINDINGS

### Perception of Nurses of their Professional Role Regarding Medication Management

The study showed that majority of the respondent 105(63.4%) agreed that nurse's role in medication management involves administration of medication safely. Majority of the respondent 160(97.0) strongly agreed that it involves monitoring for desirable and unwanted side effect, majority of the respondents (96(58.2%)) strongly agreed that it involves providing patient medication education.

This finding is in line with the findings of other studies: Armitage and Knapman (2003)<sup>5</sup> reported that medication management is among the most frequent activities performed by nurses; provision of safe and effective medication management is an important component of registered nurses' responsibilities, (Brady, Malone, and Fleming 2009; Maniasa and Bullock 2002) stated that the roles of clinical nurses in medication management are complex and multifaceted and these roles include: administering medication safely and efficiently, assessing and monitoring for desirable and unwanted effects, discharge planning, and providing patient education. Most of the respondents 160(97.0%) agreed that it involved double checking of medication, majority of the respondent 96(58.2%) strongly agreed that administering of right medication is a role of nurses in medication management. Majority of the respondents 118(71.5%) strongly agreed that nurse's role in medication management involves medication calculation. Most of the respondents 160(70.0%) also agreed that it involves the right dosage.

**Table 2. Perception of nurses of their professional role regarding medication management (n=165)**

Variable	Frequency (N)	Percentage (%)
Nurses' role in medication management involves administration of medication safely		
Agreed	105	63.6
Strongly agreed	60	36.4
Disagree	0	0.0
Strongly disagree	0	0.0
It involves monitoring for desirable and unwanted side effect		
Agreed	5	3.0
Strongly agreed	160	97.0
Disagree	0	0.0
Strongly disagree	0	0.0
It involves providing patient education		
Agreed	96	58.2
Strongly agreed	69	41.8
Disagree	0	0.0
Strongly disagree	0	0.0
It involves double checking of medication		
Agreed	160	97.0
Strongly agreed	5	3.0
Disagree	0	0.0
Strongly disagree	0	0.0
Administering of right medication is a role of nurses in medication management		
Agreed	69	41.8
Strongly agreed	96	58.2
Disagree	0	0.0
Strongly disagree	0	0.0
Nurses' role in medication management involves medication calculation		
Agreed	47	28.5
Strongly agreed	118	71.5
Disagree	0	0.0
Strongly disagree	0	0.0
It involves checking of medication constituent		
Agreed	47	28.5
Strongly agreed	96	58.2
Disagree	0	0.0
Strongly disagree	0	13.3
Nurses' role in medication management involves the right dosage		
Agreed	160	97.0
Strongly agreed	5	3.0
Disagree	0	0.0
Strongly disagree	0	0.0
Nurses' role in medication management involves proper document		
Agreed	160	97.0
Strongly agreed	5	3.0
Disagree	0	0.0
Strongly disagree	0	0.0

**Table 3. Errors that could Occur as a Result of Poor Medication Management (n=165)**

Variable	Frequency (N)	Percentage (%)
Administration of wrong dosage		
Agreed	120	72.7
Strongly agreed	45	27.3
Disagree	0	0.0
Strongly disagree	0	0.0
Administering medication to wrong patient		
Agreed	140	84.8
Strongly agreed	25	15.2
Disagree	0	0.0
Strongly disagree	0	0.0
Unwanted side effects		
Agreed	75	45.4
Strongly agreed	80	48.5
Disagree	0	0.0
Strongly disagree	10	6.1
Wrong route		
Agreed	140	84.8
Strongly agreed	25	15.2
Disagree	0	0.0
Strongly disagree	0	0.0
Wrong constituent		
Agreed	74	44.9
Strongly agreed	69	41.8
Disagree	0	0.0
Strongly disagree	0	13.3
Death of the patient		
Agreed	70	42.4
Strongly agreed	45	27.3
Disagree	6	3.6
Strongly disagree	44	26.7

**Table 4. Relationship between Nurses years of experience and perception of their professional role regarding medication management at the Federal Medical Centre Yenagoa Bayelsa State (n = 165)**

Variables	Level of perception			Pearson Chi-Square $X^2$ p-value Df	Remark
	High perception	Low perception	Total		
Years of experience					
1-5	70	0	70	$X^2 = 144.62$ p-value=0.013 Df=3	Significant relationship
5-10	29	0	29		
11-15	6	22	28		
16 and above	0	38	38		
Total	105	60	165		

Also, majority 160(70.0%) agreed that the role of the nurse in medication management involves proper documentation, Guidance to Nurses and Midwives on Medication Management (2007) stated that the activities involved in medication management include: monitoring and documentation of medication, double checking of medication, five rights of medication and patient medication education.

#### Errors that could occur as a Result of Poor Medication Management

A medication error is defined as the "failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim (Sujata, Nawin, Chandan, and Sagar, 2011). Some of the most identifiable events can be related to errors in professional practice, prescribing, dispensing, distribution, and education or monitoring. McBride-Henry, and Foureur (2006). The study revealed that majority of the respondent 120(72.2%) agreed that wrong dosage is an error that could occur as a result of poor medication management, 140(84.8%) agreed that administering medication to wrong patient is an error that could occur as a result of poor medication management, 80(48.4%) strongly agree that unwanted side effect is an error that could occur as a result of poor medication management, 140(84.6%) agreed that wrong route is an error that could occur as a result of poor medication management, 74(44.9%) agreed that wrong constituent is an error that can occur as a result of poor medication management while 70(42.4%) agreed that patient death is error that could occur as a result of poor medication management.

According to McBride-Henry and Fourer (2006) the following errors can occur as a result of poor medication error: wrong administration route, wrong intravenous push rate, omission of dose, calculation error, wrong dose, wrong patient, wrong time, dose delayed, patient death, wrong route, allergy related error and additional/ unauthorized dose. Cima and Clarke (2012) stated that patient safety experts have concluded that medication errors happen for a number of reasons, but the most common causes include the following: Poor communication, such as incomplete patient information, illegible handwriting, or miscommunication of drug orders, ambiguities in product names, dosing units, or medical abbreviations. lack of appropriate labeling, environmental factors, such as lighting, heat, noise, and interruptions, patient misuse because of poor understanding of the directions for use of the medication. The use of right patient, right drug, right dose, right route, and right time should minimize the risk of medication error to patient.

#### Relationship between Nurses Years of Experience and Perception of their Professional Role regarding Medication Management

The study revealed that there was a significant relationship between nurses' years of experience and perception of their

professional role regarding medication management with  $P(0.013) < 0.05$ . Hence, the null hypothesis was rejected and the alternative ( $H_0$ ) accepted.

#### Summary

The study was carried out to determine registered nurses perception of their professional regarding medication management in Federal Medical Center Yenagoa Bayelsa State. Relevant literatures were reviewed, data was collected using questionnaire and the information obtained was analyzed using descriptive statistics of frequency tables and simple percentage. Majority of the respondents 35(21.2%) were between the ages of 26 – 30 years with a minimum age of 21 years. Most of the respondents 103 (62.4%) were females, majority of the respondents 160(97.0) strongly agreed that the role of nurse in medication management involves monitoring for desirable and unwanted side effect, 96(58.2%) strongly agreed that it involves providing patient medication education. The study also revealed that majority of the respondent 120(72.2%) agreed that wrong dosage; 140(84.8%) agreed that administering medication to wrong patient; 80(48.4%) strongly agree that unwanted side effect are errors that could occur as a result of poor medication management. The study further revealed that there is a significant relationship between nurses' years of experience and perception of their professional role regarding medication management.

#### Conclusion

- The role of the nurse in medication management has evolved significantly in recent years and indeed is likely to continue to develop in response to healthcare needs.
- The study revealed that nurses have a good perception of their professional roles regarding medication management in federal medical centre Yenagoa Bayelsa State.

#### Implication to Nursing Profession

Nurses, in the majority of cases, represent the last safety check in the chain of medication management and therefore, are the final safeguard of patient wellbeing and potentially, the difference between achieving the desired outcome and harming the patient lies with them. Also, in determining the scope of practice, the nurse makes judgments as whether he/she is competent to carry out a particular role or function with regards to medication management.

#### Recommendation

- Nurses should be educated about their roles regarding medication management in order to promote safety administration of medications.

- Government should promote the training of nurses in area of medication management.
- Furthermore, the nurse must take measures to develop and maintain the competence necessary for professional practice.
- Nurses are obliged to report any error or omission in practice that jeopardizes patient safety.

## REFERENCES

- Armitage, G., and Knapman, H. 2003. Adverse events in drug administration: a literature review. *J Nursing Man*; 11(2): 130-40.
- Biron, A. D., Lavoie-Tremblay, N., and Loiselle, C. G. 2009. Characteristics of work interruptions during medication administration. *J Nurs.Scholarsh*;41(4)330-6
- Brady, A. M., Malone, A. M., and Fleming, S. 2009. A literature review of the individual and system factors that contribute to medication errors in nursing practice. *Journal of Nursing Management* 17, 679–697.
- Cima. L. E., and Clarke, S. P. 2012. The role of the nurse in medication safety. 2<sup>nd</sup> edition. U.S.A. Joint commission resources Inc. [www.jcrinc.com/the-nurse-s-role-in-medication-safety](http://www.jcrinc.com/the-nurse-s-role-in-medication-safety).
- Guidance to Nurses and Midwives on Medication Management 2007. AN BORD ALTRANAIS
- Manias, E. and Bullock, S. 2002. The educational preparation of undergraduate nursing students in pharmacology: clinical nurses' perceptions and experiences of graduate nurses' medication knowledge. *International Journal of Nursing Studies*; 39: 773–784
- McBride-Henry, K. and Foureur, M. 2006. Medication administration errors: understanding the issues. *Australian Journal of Advanced Nursing* 23(3).
- National Prescribing Centre. 2008. Moving towards personalizing medicines management: improving the outcomes for people through the safe and effective use of medicine. Liverpool NPC. <https://www.nursingtimes.net/following-the-patient-journey-to-improve-med...>
- Sujata, S., Nawin, P., Chandan, S., and Sagar, G. 2011. Drug prescribing pattern and prescription error in elderly: A retrospective study of inpatient record. *Asian Journal of Pharmacy and Clinical Research*;4(3): 129-132.

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