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## Nursing diagnosis domains utilized in the intensive care unit of a tertiary hospital in Ibadan, Nigeria

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### Abstract

**Background:** Nursing process has been identified as a tool for effective nursing practice. However, current evidence reveals either poor implementation or outright none utilization even in the 21<sup>st</sup> century. One of the reasons is lack of understanding of the process based on lack of patient assessment by the nurses and inaccurate nursing diagnostic statements. The purpose of this study was to determine the extent to which nursing assessment was performed by the nurses and to identify the nursing diagnostic domains being frequently utilized in the study setting.

**Methodology:** This was a retrospective study conducted in the burn and cardiothoracic intensive care unit of the University College Hospital (UCH), Ibadan. A total of 230 nursing process booklets of patients were conveniently sampled which included 80 and 150 nursing process booklet of patients with head and burn injury respectively. Descriptive statistics was used to compute the results of the study.

**Results:** The study revealed that, initial nursing assessment was done for all the patients; hence first set of nursing diagnoses were identified. Time lapsed assessment with accompanying changes in nursing diagnoses was done for only 28% and 32.5% of the patients with burns and head injury respectively. The most frequently used nursing diagnoses were from domain 11- safety/protection (35.7%). The second category include nursing diagnosis domain 4 – "Activity/ rest" (28.6%), 14% were domain 2- Nutrition, while the remaining 21% (7% each) were the domains 3, 5 and 12 - Elimination, cognitive and perceptual patterns and safety/protection respectively. There were no nursing diagnoses from domains 1: health promotion, domain 6: self perception, domain 7: role relationships, domain 8: sexuality, domain 9: coping/stress tolerance, domain 10: life principles and domain 13: growth and development.

**Conclusion:** Intensified effort through continuing nursing education or seminars should be instituted to educate nurses on the importance of quality

assessment in effective clinical judgment and utilizing nursing diagnosis fully in all domains with adequate documentation.

**Keywords:** Nursing process, Nursing diagnoses domains, Intensive care unit, Tertiary Hospital.

### Résumé

**Introduction :** Le procès infirmier a été identifié comme un outil pour l'effective pratique de l'infirmierie. Cependant, l'évidence courante révèle soit pauvre implémentation ou entièrement aucune utilisation même dans le 21<sup>ème</sup> siècle. L'une des raisons est le manque de jugement du procès basé sur le manque de répartition de patient par les infirmier(e)s et les inexacts relevés de diagnostic infirmier. Le but de cette étude était de déterminer le degré auquel la répartition infirmière était exécutée par les infirmier(e)s et identifié les domaines de diagnostic infirmier étant fréquemment utilisés dans l'établissement d'étude.

**Méthodologie :** Ceci était une étude rétrospective menée dans l'unité de soin intensive de brûlure et cardiaque-thoracique du Collège Hospitalier Universitaire (CHU), Ibadan. Un total de 230 carnets de procès infirmier des patients étaient convenablement échantillonnés ce qui comprenait 80 et 150 carnets de procès infirmier des patients avec injurie de tête et de brûlure respectivement. La statistique descriptive était utilisée pour computer les résultats de l'étude.

**Résultats :** L'étude révélait que, la répartition infirmière initiale était faite pour tous les patients; de là les premières séries de diagnoses d'infirmier étaient identifiées. La répartition du chute de temps avec accompagnement d'altération dans les diagnoses d'infirmier était faite pour seulement 28% et 32,5% des patients avec injurie de brûlure et de tête respectivement. Les plus fréquemment utilisés diagnoses d'infirmier étaient du domaine 11 – sûreté/protection (35,7%). La deuxième catégorie comprenait diagnose d'infirmier domaine 4 – 'Activité/ repos' (28,6%), 14% étaient domaine 2 – Nutrition, tandis que les 21% (7% chaque) restants étaient des domaines 3, 5 et 12 – Elimination, modèle de connaissance et perception et sûreté/protection respectivement. Ils n'y avaient pas de diagnoses d'infirmier des domaines 1 : promotion de santé, domaine 6 : perception de soi même, domaine 7 : rôle des relations, domaine 8 : sexualité, domaine 9 :

recouvrement/tolérance du stress, domaine 10 : les principes de vie et domaine 13 : croissance et développement.

**Conclusion :** Les efforts intensifiés à travers l'éducation d'infirmier continuée ou séminaires doivent être institués pour éduquer les infirmier(e)s sur l'importance de qualité de répartition dans l'effectif jugement clinique et utilisant la diagnose d'infirmier complètement dans tous domaines avec documentation adéquate.

**Mots clés :** *Procès infirmier, Domaines de la diagnose d'infirmier, Unité de soin intensive, Hôpital Tertiaire.*

### Introduction

Nursing diagnosis is a concept that has helped to map out the domain of nursing practice. It is a clinical judgment about individual's responses to actual or potential health problems which provides the basis for selection of nursing interventions to achieve outcomes for which the nurse is accountable according to NANDA-I [1]. Nursing diagnosis constitutes a tool for holistic, individualized care for the client, family, and community and contributes to professional status of disciplines [2]. It is important to be able to distinguish between nursing diagnosis as a process and the actual diagnostic terms used for individual health phenomena. Thus, the theoretical content of NANDA-I (NANDA International) classification is based on human response patterns to diseases or conditions which form 13 domains [1] and 47 classes, 202 diagnoses, 385 outcomes in Nursing Outcomes Classification (NOC) [2], and 542 interventions in Nursing Interventions Classification (NIC) [3] that have been developed and refined with systematic processes to date.

NANDA-I is a major nursing terminology that plays an important role in describing and defining nursing care; other nursing terminologies include the NIC (Nursing Interventions Classification) and NOC (Nursing Outcomes Classification) they provide the concepts and clear definitions of the phenomena of nursing and enhance nursing care by allowing nurses and other care providers to use the same terminology to describe patient problems, nursing interventions and patient outcomes in many settings, both nationally and internationally [4]. Likewise the nursing diagnostic statement is a major tool used to implement the nursing process. The nursing process was defined by Yura and Walsh [5] as being a systematic and goal directed set of activities, which are interrelated and dynamic, used by the nurse to determine, plan and implement individualized care. It includes 5 major steps,

Assessment, Diagnosis, Planning, Implementation and Evaluation which according to Adejumo and Olaogun [6] has been expanded to 6 steps. Nurses use the nursing process, an essential core of practice, in clinical settings to deliver comprehensive patient care [7].

### *Nursing assessment and clinical judgment*

The importance of assessment, the first step of the nursing process cannot be over-emphasized. The quality of patient assessment is usually visible in the diagnostic statement; it gives rise to quality clinical judgement and therefore accurate nursing diagnosis. Nursing health assessment is the process of collecting and clustering data. It can be comprehensive or initial, focused (diagnostic drive or medication drive, daily), emergency, and times lapsed assessment [8]. The nursing assessment establishes a data base about client needs, health problem, responses related to experiences, health practices, values, lifestyle and expectation. Hence, the nurse is expected to carry out a complete and holistic nursing assessment of every patient's needs, regardless of the reason for the encounter.

Since health is dynamic, assessment should be continuous. The aim of nursing is to obtain optimal level of functioning; therefore, assessment should be geared towards determining the level of health by monitoring patient's progress, thus ensuring a prompt detection of adverse events or delays in recovery. Hence, for the purpose of uniformity some models have been found useful in gathering quality information from patient during assessment, some of such models are Maslow's hierarchy of need, Body Systems model, Roy's adaptation model and Gordon's functional health pattern according to Kozier *et al* [8].

Accuracy of nurses' diagnoses, defined as a rater's judgment of the match between a diagnostic statement and patient data [9], should be of great concern to nurses in both practice and education because interpretation of patient data serves as the basis for selecting an effective nursing diagnosis as well as selection of nursing interventions that will enhance positive patient outcomes. Errors in clinical judgment can be due to incomplete assessment data emanating from validation errors, data misinterpretation or diagnostic errors. Therefore, an effective nursing assessment aids an effective clinical judgment and improved nursing diagnosis [2, 6].

### *Demands of the Intensive care unit (ICU)*

In general, intensive care unit is the most expensive, technologically advanced and resource-intensive area

of medical and nursing care. In the United States, estimates of the 2000 expenditure for critical care medicine ranged from US\$15–55 billion. During that year, critical care medicine accounted for 4.2% of national health expenditure and about 13% of hospital costs [10]. Patients requiring intensive care may require support for instability (hypertension/hypotension), airway or respiratory compromise (such as ventilator support), acute renal failure, potentially lethal cardiac arrhythmias, or the cumulative effects of multiple organ dysfunction syndromes. They may also be admitted for intensive/invasive monitoring, such as the crucial hours after major surgery when deemed too unstable to be transferred to a less intensively monitored unit. Therefore, Nurses, as part of a multidisciplinary team of healthcare providers should promote effective care delivery for these patients. This can be achieved by focusing nursing care on the patient's responses to the medical diagnosis through the use of nursing diagnoses (NANDA-I), Nursing Interventions Classification (NIC), and desirable Nursing Outcomes Classification (NOC)

#### *Challenges in the implementation of nursing process*

Despite strategies to improve nursing practice by the use of the nursing process in Nigeria, research reveals a poor implementation with various limitations being identified ranging from shortage of manpower, time factor, lack of understanding of the nursing care plan and resistance to change [2, 10]. Lee [11], reported that nurses tend to be unfamiliar with statements of related factors, use objective data to describe patients' condition, ignore description of nursing goals, dutifully highlight interventions without always executing them, and choose the same evaluation just to meet up with requirements and many nurses are not well educated in the use of nursing classifications (NIC & NOC). Shortcomings in application of nursing diagnoses involving missing coherence between nursing interventions and outcomes were also described in various studies. However, in an attempt to reduce the challenges in effective utilization of nursing diagnosis, studies have revealed that carefully implemented classifications led to enhanced, accurately stated nursing diagnoses, more effective nursing interventions, and better patient outcomes [12]. Among other strategies identified is the provision of nursing care plan for every patient as a major factor that can promote the implementation of nursing process [10].

Over the last few decades, more efforts have been made to advance nursing documentation to

increase its usability through the use of nursing process as a model and one of these initiatives was the development and use of research based standardized nursing terminologies such as the International Nursing Diagnoses Classification (NANDA International). Accurate diagnoses are therefore a prerequisite for choosing diagnostic specific interventions in order to achieve favourable nursing sensitive patient outcomes. In clinical practice, it has been observed that certain diagnostic domains are frequently utilized in certain setting than the others. This may be attributable to many reasons such as priority needs of patient in such settings or knowledge of the nurses. Identification of a set of diagnosis and nursing intervention frequently utilized in certain health settings can therefore be helpful in reducing the challenges encountered by nurses in implementing the nursing process. It can create an evidence-based body of knowledge concerning care of patients in that defined health care setting, thus serving as a teaching guide and basis for protocol development for nurses in such setting. Besides, there is paucity of data in the unit of the selected setting for this study and this will add to the existing body of knowledge on nursing process generally and standardized nursing languages specifically.

The purpose of this study was therefore to explore the domains of nursing diagnoses frequently utilized in the care of patients in the critical care setting. The following were the specific objectives: 1. To find out, the extent to which patient assessment for diagnostic accuracy was being done, 2. To determine the extent to which nursing diagnoses were used for patient care plan, 3. To assess the appropriateness of defining characteristics and 4. To elicit the frequently used nursing diagnoses in the selected hospital. The study is poised to provide answer to the following research questions: Do nurses in the selected setting utilize nursing process in patient care? What is their means of nursing care plan documentation? What are the nursing diagnoses domains frequently utilized in the selected setting? Do they perform initial and times lapsed on-going nursing assessment and how frequently? Studies [13] have shown that qualitative improvements were achieved through the implementation of NANDA International nursing diagnoses.

Social Policy Statement published in 1980 by the America Nurses' Association (ANA) in Adejumo and Olaogun [6] provides the theoretical background for this study. Analysis of objective and subjective data related to phenomena of concern (assessment) leads to clinical judgements (diagnoses and outcome identification); theoretical, practical and scientific

knowledge about the relationships between the potential interventions and desired outcomes provide the basis for planning interventions and examination of the effectiveness of the interventions in terms of outcome attainment is the basis for evaluation.

### Materials and method

A retrospective design was employed for the study, using secondary data analysis. Appropriate permission was taken from the unit heads and the matrons in charge of the units selected for the study for the nursing process booklets to be accessed and the information obtained was used only for academic purpose and kept confidential. The study was conducted in the burn and cardiothoracic intensive care unit of the University College Hospital, (UCH), Ibadan. The most frequently occurring nursing diagnoses in nurses' daily practice were identified with a convenience sampling of available patients' nursing process booklets (n= 230). Eighty (80) Nursing process booklets of patients with head injury admitted over a year period between January and December 2011, and 150 nursing process booklets of patients with burn injury admitted within January 2010 and June 2012. These were the nursing process booklets available on the wards during data collection. Usually, they are sent to the medical records from time to time but at this time, the ones

available were selected for analysis using convenience-sampling technique. A checklist proforma used for a similar study in the same setting previously served as the research tool with basic demographic information such as age and sex of patients in the first part. This was followed by specific questions on nursing process utilization e.g. development of care plan as the second part. The third part covered evidence of nursing assessment, initial and times lapsed or follow up assessment as well as re-assessment. Formulation of appropriately labelled nursing diagnoses and correct defining characteristics comprise the third part. Descriptive statistics was used to compute the results of the study.

### Results

#### Demographic characteristics

According to Table 1, patients within the age category of 1-10 years constitute 29.3%, followed by the category 11-20years (21.3%) and those above 70years category account for 4% of the total population among the patients with burn injury. For patients with burn, the age range 41-50 years has the highest percentage (17.5%). In both units, the male gender is predominant accounting for 78.6% and 77.5% in the 'burns' and 'cardiothoracic' intensive care units respectively. About 21.3% of the patients with burn were hospitalized for one to five

**Table 1:** Demographic variables

S/N	Age	Burn injury n=150		Head injury n=80	
		Frequency	percentage	frequency	Percentage
1.	1-10	44	29.3	6	7.5
	11-20	32	21.3	9	11.3
	21-30	26	17.3	8	10
	31-40	20	13.3	32	40
	41-50	7	4.6	14	17.5
	51-60	8	5.3	5	6.3
	61-70	7	4.6	5	6.3
	Above 70	6	4	-	-
2	Sex				
	Male	118	78.6	62	77.5
	Female	32	21.3	18	22.5
3	No of days on admission				
	1-5	32	21.3	45	56.3
	6-10	17	11.3	30	37.5
	11-15	25	16.7	5	6.3
	16-20	24	16	-	-
	21-25	17	11.3	-	-
	26-30	20	13.3	-	-
	Above 30 days	15	10	-	-
		n=150	100	n=80	100

days while only 10% spent more than 30 days on admission. Likewise, among the patients with head injury, 56.3% had one to five days on admission in the ICU, 37.5% spent six to ten days on admission, while 6.3% spent 11-15 days on admission.

*Conduct of nursing assessment*

Evidence from Table 2 indicates that initial assessment was done for all the patients within 48 hours of admission, and corresponding nursing diagnoses were formulated. Times lapsed nursing assessment with accompanying changes in nursing diagnoses were done for only 28% and 32.5% of the patients with

Table 3 shows that "Impaired tissue integrity" (84.7%) was the most frequently utilized nursing diagnosis, "Impaired urinary elimination" (57.3%), "Deficient fluid volume" (52%), "Ineffective nutrition less than body requirement" (48.6%), "Pain" (46.7%), "Ineffective breathing pattern" and "Hyperthermia" (38%), "Ineffective airway clearance" (22.6%) were also frequently occurring diagnosis in the care of patients with burn injury. "Infection risk for" (16.7%), "Self care deficit" (12%), "Ineffective peripheral tissue perfusion" and "hypothermia" (4.6%), "Disturbed sensory

Table 2: Nursing assessment

Nursing assessment		Burn s patient		Head injury	
		frequency	Percentage (%)	Frequency	Percentage (%)
Initial nursing assessment Within 48hrs of admission	Done	150	100	80	100
	Not done	-	-	-	-
Time lapsed nursing assessment with accompanying change in nursing diagnosis	Done	42	28	26	32.5
	Not done as evidenced by lack of documentation	108	72	54	67.5
		n=n=150		n=80	

burns and head injury respectively and further assessment was not done for the remaining patients as seen in the nursing process booklet.

perception" (8%) and "Metabolic process altered" (2.6%) were also utilized.

*Nursing diagnoses utilized in the care of patients with burn injury n=150*

*Nursing Diagnosis utilized in the care of patients with head injury n=80*

Table 3: Nursing Diagnoses in the care of patients with burn injury n=150

S/N	Nursing diagnosis	No of subjects reported	Total percentage	Domains
11	Ineffective airway clearance	34	22.6	Domain 11
2	Pain	70	46.7	Domain 12
3.	Deficient fluid volume	78	52	Domain 2
4.	Impaired tissue integrity	127	84.7	Domain 11
5.	Hyperthermia	57	38	Domain 11
6.	Ineffective nutrition less than body requirement	73	48.6	Domain 2
7.	Infection risk for	25	16.7	Domain 11
8.	Ineffective breathing pattern	57	38	Domain 4
9.	Impaired urinary elimination	86	57.3	Domain 3
10	Self care deficit	18	12	Domain 4
11	Ineffective peripheral tissue perfusion	7	4.6	Domain 4
12	Disturbed sensory perception	8	5	Domain 5
13	Metabolic process altered	4	2.6	-
14	Hypothermia	7	4.6	Domain 11

Table 4 reveals that disturbed sensory perception was the most frequently utilized (100%). Ineffective airway clearance, Ineffective breathing pattern, Deficient fluid volume were next in frequency (93.8%) each, followed by impaired urinary elimination (80%), pain

Table 5 shows that 35.7% of the nursing diagnoses utilized for the patients with burn injury were from domain 11- Safety and protection, 28.6% of the nursing diagnoses were from domain 4 - Activity/

**Table 4:** Nursing diagnoses in the care of patients with head injury n=80

S/N	Nursing diagnosis	No of subjects reported n=80	Percentage (%)	Domains
1	Disturbed sensory perception	80	100	Domain 5
2	Ineffective peripheral tissue perfusion	13	16.3	Domain 4
3	Risk for vascular Trauma	8	10	Domain 11
4	Ineffective airway clearance	75	93.8	Domain 11
5	Ineffective breathing pattern	75	93.8	Domain 4
6	Deficient fluid volume	75	93.8	Domain 2
7	Hyperthermia	24	30	Domain 11
8	Impaired urinary elimination	64	80	Domain 3
9	Pain	24	30	Domain 12
10	Impaired skin integrity	13	16.3	Domain 11
11	Infection risk for	6	7.5	Domain 11
12	Imbalance nutrition less than body requirement	8	10	Domain 2
13	Activity intolerance	8	10	Domain 4
14	Impaired physical mobility	8	10	Domain 4
			100	

**Table 5:** Frequency of nursing diagnosis domains

S/N	Nursing diagnosis domains	Burn injury		Head injury	
		Frequency	Percentage	Frequency	percentage
1.	Health promotion	-	-	-	-
2	Nutrition	2	14	2	14
3	Elimination	1	7	1	7
4	Activity/rest	4	28.6	3	21.4
5	Cognitive and perceptual pattern	1	7	1	7
6	Self perception	-	-	-	-
7	Role relationships	-	-	-	-
8	Sexuality	-	-	-	-
9	Coping /stress tolerance	-	-	-	-
10	Life principles	-	-	-	-
11	Safety/protection	5	35.7	5	35.7
12	Comfort	1	7	1	7
13	Growth and development	-	-	-	-
		n=14	Total =100	N=14	

and hyperthermia (30%), Ineffective peripheral tissue perfusion and impaired skin integrity (16.3%), imbalance nutrition: less than body requirement, activity intolerance and impaired physical mobility (10%), and lastly, Infection, risk for (7.5%).

rest, 14% were from domain 2- Nutrition, while the remaining 21% (seven percent each) were from the domains three, five and twelve - Elimination, Cognitive and Perceptual patterns and Safety/ protection respectively. Similar results were found among the patients with burn injuries.

*Frequency of nursing diagnoses domains*

**Discussion**

The patients admitted in the ICU studied were of various ages giving room for multiple approaches to care, because patients of different age groups have different needs necessitating individualized and holistic nursing care and this can be achieved by effective use of the nursing process. Majority of the patients admitted in these units spent more than five days on admission. Extended period of days on admission, gives room for identification of other patients' need after the emergency needs have been met thus giving room for time lapsed assessment and utilization of new nursing diagnosis developed from the identified patient needs over time.

Nursing diagnoses were utilized in the care of all the patients in the Intensive care unit studied. This is a marked improvement, which negates evidence from previous researches [6, 10], which showed that the care plans were neglected. Initial nursing assessment was done in all the care plans, from which the first sets of nursing diagnoses were identified. However, times lapsed nursing assessment were not done for majority of the patients leading to stereotyped care plans, where same set of nursing diagnoses were utilized repeatedly without change until patients' discharge or death. This corroborates the findings of Akbari and Shams [14] which revealed that times lapsed assessment were only partly documented in the patient's kardex, and not in the nursing process chart. Similarly, Ehrenberg *et al* [15] reviewed 106 nursing records for adherence to nursing process standards. The record audit revealed that the admission assessment was completed in 50% of records; 66% had no care plan and 90% had no nursing diagnosis. In addition to this corroboration, Paans *et al* [16], found inaccurate documentation of nursing diagnoses and interventions, despite the documentation systems while in further support of this finding, Ammenwerth *et al* [17] identified incomplete documentation.

The frequently utilized nursing diagnosis found in this study include the following: 'impaired tissue integrity', 'impaired urinary elimination', 'pain', 'ineffective airway clearance', 'Ineffective nutrition less than body requirement' and 'disturbed sensory perception'. This is similar to the results revealed by Halpen *et al*, [18], where impaired gas exchange, alteration in comfort and altered fluid volume ranked high.

Similarly, the frequently used nursing diagnoses were from domain 11: safety/protection with nursing diagnoses including 'impaired tissue integrity', 'hypothermia', 'hyperthermia', 'risk for vascular trauma', 'infection, risk for', 'ineffective airway clearance'. The second category include

domain 4: "Activity/ rest", the nursing diagnoses include 'ineffective breathing pattern', 'impaired peripheral tissue perfusion', activity intolerance and self care deficit (undefined). This agrees with the findings of Yücel, *et al* [19], where nineteen subgroups of nursing diagnoses about safety/protection domain, and 15 subgroups about activity/rest domain were seen at different rates in the patients having mechanical ventilation support in a respiratory intensive care unit in Turkey.

The third category of nursing diagnoses utilized was domain 2- Nutrition; the nursing diagnoses from this domain utilized were 'Impaired nutrition less than body requirement' and 'deficient fluid volume'. Other domains utilized were domain 3- elimination, domain 5-Cognitive and perceptual pattern, domain 12- comfort with 'impaired urinary elimination', 'disturbed sensory perception' (unspecified) and 'pain' from domains 3, 5 and 12 respectively.

There was no nursing diagnosis from the following domains: 1: health promotion, 6: self-perception, 7: role relationships, 8: sexuality, 9: coping/stress tolerance, 10: life principles and 13: growth and development. This could be attributed to the inadequate knowledge on utilization of the nursing diagnosis and poor clinical judgment resulting from deficient nursing assessment. Also, due to nursing personnel shortages and pressure of burden of care, only the most urgent needs in direct patient contact were met; as such quality of continuous patient assessment and documentation of nursing care was neglected [20-24]. This lack of nursing assessment and documentation results in a lack of measurable description of nurses' work and contribution to the health of patients. Nursing diagnoses from the neglected domains are also very important in the care of these patients.

Some inadequacies in the use of the nursing diagnosis were also discovered. Such inadequacies include the use of nursing diagnosis not found in the NANDA-I diagnosis list such as 'impaired metabolic function', 'risk for electrocution' 'self care deficit'-undefined and 'disturbed sensory perception' – undefined, this further emphasizes the need for more intensified education on the use of NANDA-I diagnosis. There is no harm in developing new nursing diagnoses but they have to be forwarded to the clearing house for deliberation and due validation procedure before acceptance. A gross anomaly found in these booklets is the use of nursing diagnoses without appropriate defining characteristics. The implication of this is that outcome identification will be omitted hence evaluation will be difficult as there



will be no indicators for comparison and monitoring of patients' progress and clinical status. The implication of this is that such care will be less than optimal, of poor quality without any reflection of nursing excellence. Nursing has gone beyond this in other parts of the world and efforts should be put in place to ensure compliance with international standards in nursing.

Literature [25 - 28] indicated that data documented in the nursing records were not fully adequate and accurate to reflect reality. Urquhart *et al* [29] stated that nursing documentation had been used to support different philosophies of nursing practice. The process facilitates documentation of care, provides a unified language for the profession of nursing and enhances professional growth as nurses evaluate effectiveness of their interventions [6,30]. However, evidence provided in this study did not support this and there is need for urgent educational program to strengthen nurses' capacity in this direction.

### Conclusion

A central element of the nursing process is how nurses derive a nursing diagnosis based on clinical assessments, interviews, and observations as Wilkinson [31], observed but which the current study did not provide evidence for. Diagnoses are derived from assessment and from a particular domain. Nurses therefore need to analyze a patient's responses to health problems using interviews and observations to link the three components of data elements - Nursing diagnoses, Interventions and Outcomes. Otherwise, good information from nursing documentation will be difficult to utilize in decision making processes and the documentation will be inconsistent and non-standardized, with resultant poor assessment of the knowledge and skill that nursing brings to health care as this study suggests and corroborated by ANA, 1991 [6].

Although, reasonable development in the use of nursing diagnosis has been identified, as nurses have developed from the stage of non-utilization of the care plan as found in other hospitals to the stage of its utilization, as in the current setting. Nonetheless, the use of nursing process in Nigeria can still be viewed as going through its formative phase of nursing diagnosis development, lying within the second generation (1970-1990) where nurses are still focusing on the development of nursing diagnoses and not much of diagnostic reasoning. Hence, intensified effort through continuing nursing education or in-house seminars should be instituted to educate Nurses on the importance of quality assessment

towards effective clinical judgment and the importance of utilizing nursing diagnosis fully in all domains of patient's need instead of selected few used stereotypically. Akin to this is the need for proper documentation, as anything not documented is not done.

### Implication for nursing and future research

Further studies on identification of frequently used nursing diagnoses in other units may be valuable for content validation studies and nursing diagnosis protocol development. This will aid standardized care. This will also enhance effective communication and serve as a teaching tool as well. Besides, for nursing to take her place in the 21<sup>st</sup> century informatics, electronic health records and technology in general, standardized nursing languages is the way forward and the starting point is accurate implementation of nursing process. Therefore, every nurse should be more than determined to make a difference in the life of every patient she encounters by offering comprehensive individualistic nursing care.

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