NURSES DISCERNMENT ON COSTING NURSING CARE: A CASE STUDY FROM TWO SELECTED PUBLIC HOSPITALS IN IBADAN, NIGERIA

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ABSTRACT

Nursing services costing has been a major interest to nurses for a long period of time. Determination of nursing costing is germane in order to show the effectiveness of nursing practice in an improved and affordable health care delivery system. This has been a major concern of managers that has the mind of quality and affordable health services. The treatment or intervention should be considered as "product" of nursing care and should provide an explainable term for billing.

The study was non-experimental, descriptive and went about eliciting the views of nurses on costing nursing care at two public hospitals namely: University College Hospital and Adeoyo Maternity Teaching Hospital. Questionnaire was the instrument used in eliciting nurse's response. It was administered randomly on 300 selected respondents across various wards within the hospitals.

The data was collected and analysed using SPSS20.0 to generate frequency, and cross tabulations to explore statistical relationship between variables. The result shows that 89.2% of the respondents viewed costing of nursing care as an important issue to be looked into.

The study concluded that nursing care costing is germane to enhancing the status and imagery of the nurses, it is essential because it would enhance the performance of nurses in discharging their duties. There is need to have a procedural manual agreed on by nursing practitioner on costing of each care given.

Key words: Costing, Health care delivery system, Intervention, Nursing Care, Practitioner

Introduction

Nursing Services costing is an idea that has generated a lot of interest and argument in favour and against. This is so because many do not know that there is need to quantify and qualify the services been rendered by nurses in health care facilities. This is brought to bear because other health care service provider like the doctors has a standardized fee for each treatment/consultation in which nurses actions are inclusive. There is argument that costing nursing services can bring about high cost of health service delivery. Based on this line of thought, does it mean the nurses services can be done away with? Considering the tasks and care been given by the nurses compare to other health personnel, one will understand that nurses are supposed to be held in high regard and so remunerated accordingly.

Determining the costs of nursing services has been of concern to nurses for several decades (Elliot, 2007). Nursing cost determination is important to demonstrate the cost effectiveness of nursing practice to improve delivery and decrease health care cost. If placed in proper perspectives it will be seen that rather than bringing about increase in the cost of accessing health care, costing nursing services will reduces the cost of health care delivery.

Benefits that are derivable from having a standardized nursing care costing includes:

- Charging out nursing services allows the customer to pay for what he or she gets.
- Customers realized that direct care has a fixed price value. This allows them to understand cost of the health care and value it.
- Hospitals can receive compensation for what they provided, to maximized profits.
- Nurses can be viewed as a revenue generator rather than expenditure channel.
- Charging a fee for services helps enhance professionalism of nursing through the traditional reimbursement.
- Costing out services stimulates productivity.
- There is room for budget control through cost accounting system facilities.
- Cost accounting system allows assessment and change the nursing departments wants thereby establishing reputation for innovation.

It is now that we arrives at how will the costing be done and by what method of billing will be.

Research Objectives

The objectives of this paper are:

i. to determine the attitude of nurses towards costing nursing care
ii. to determine whether nurses are involved in costing out their care
iii. to determine the acceptable methods for costing nursing care

Research Question

The following questions will guide this paper:

i. What is the attitude of nurses towards costing nursing care?
ii. Are nurses involved in costing out their care?
iii. What are the acceptable methods for costing nursing care?

Review of related literatures

Although Florence Nightingale saw nursing as an independent profession that was not subordinate but equal to the medical profession (Nightingale 1969), for a long time nursing was seen as inseparable from the medical profession. The medical (male) dominance strongly influenced the role development, the image and the position of nurses (Hallam 2000, Gordon 2005, Fletcher 2006).

A challenging element of cost-effectiveness analysis is the proper measurement of costs. Cost data typically come from the financial records of providers or insurers, but such administrative data are not sufficiently accurate for all studies. For example, costs borne by patients and unpaid caregivers are not represented. Administrative data also do not give the cost of innovative treatments and may not be sensitive to changes in resource use caused by an intervention. Moreover, data from one provider or insurer do not capture activities of other providers and insurers. (Smith, Barnett, 2003)

According to (John M. Welton, Mary Hughes Fischer, Sharon DeGrace and Laurie Zone-Smith, 2016) hospital nursing care accounts for around a quarter to a third of the hospital working budget and nearly half of all direct care costs. They stressed further that reimbursement for hospital care is based primarily on the medical diagnosis such as the diagnostic-related group (DRG) and principal procedures. Hospitals are not reimbursed for different levels of nursing intensity within these DRGs, essentially hiding the variability of nursing care.

Cost of Nursing Care

The actual monetary value of nursing care for each patient cannot be determined, potentially leading to over or under billing for this component of hospital care (Borsa & Anis, 2005). Nursing care accounts for approximately 25% of the total hospital operating budget and 44% of direct care costs (Kane & Siegrist, 2002; McCue, Mark, & Harless, 2003). One of the primary reasons nursing costs rose over the past several years is the increasing complexity of care and decreasing lengths of stay (Graf, Millar, Feilteau, Coakley, & Erickson, 2003).

Thompson and Dier 1991; Welton et. al, 2006 affirmed that current hospital billing practices incorporate nursing care into hotel services, more specifically room and board fees, and are billed as a flat daily rate for private, semi-private, intermediate, and intensive care rooms. The per diem rate is based on the fixed or overhead costs associated with each unit and believes

that a patient in that position gets basically the same amount of nursing care as others. This treats nursing care as a fixed charge bundled into the room rate rather than a variable charge based on actual hours of nursing care delivered for each patient. The interesting question is whether the direct costs of nursing care vary significantly from the mean and, if so, should nursing care be billed and reimbursed separate from other charges? Consider the variable amount of care delivered on a particular nursing unit. Some patients receive "average" amounts of care for that unit; for example, if nurse-to-patient ratios are one nurse for four patients on average, patients receive 3 hours of care in a 12-, hour shift or 6 hours of nursing care each day.

Barnett and Garber 1996 quoted by Smith M.W and Barnett G.P (2003): affirmed that supposing that patient care activities unrelated to an experimental intervention take up 25 percent of a nurse's time; activities that benefit research and patient care take 50 percent time; and activities needed only for the research protocol take the remaining 25 percent. In this scenario, the incremental cost of research is 25 percent of the nurse's time. Incremental costs must be stated in terms of a given level of production of other products. The extra cost from an intervention adds to total health care costs given current levels of patient care.

Little is known about the real connection among cost of nursing, billing, and reimbursement as cost accounting procedures vary across hospitals (Pines, Fager, &Milzman, 2002). This essentially makes nursing care invisible to policymakers who set payment rates. There is growing evidence that there is an independent association between nurses and patient outcomes of care (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Mark, Harless, McCue, & Xu, 2004; Needleman, Buerhaus, Mattke, Stewart, & Zelevinsky, 2002). This self-determining link opposes the enduring notion that the physician is the primary factor in defining quality of care and outcomes of hospitalization. It also challenges the assumption that the medical diagnosis should be the sole determination of hospital reimbursement.

Hospital Billing

The primary mechanism for hospital billing is the summary charge in the nationally standardized UB-92 billing abstract (American Hospital Association, 2006). These charges are based on either an ICD-9-CM or diagnostic related group (DRG) code (Mitchell, Anderson, Jr., & Braun, 2003). In a prospective payment reimbursement scheme such as the DRG, regional summary charges from the UB-92 are used as the basis for "usual or

customary" rate setting (Fedor, 2004). Hitches arise when unforeseen costs are not replicated in the hospital charge.

This margin increase raises an interesting problem about the relationship between hospital charges and reimbursement by third-party payers. All major payers only reimburse a portion of the actual charge, yet individual patients who do not have insurance are required to pay the higher non-negotiated rate (Reinhardt, 2006).

The interesting question is whether the direct costs of nursing care vary significantly from the mean and, if so, should nursing care be billed and reimbursed separate from other charges?(John M. Welton et al. 2006)

Research Design and population

The research was a non-experimental, descriptive and went about eliciting the views of nurses on costing nursing care at two public hospitals namely: University College Hospital and Adeoyo Maternity Teaching Hospital. Questionnaire was the instrument used in eliciting nurse's response. It was administered randomly on 300 selected respondents across various wards within the hospitals.

Data Analysis

A descriptive statistical technique was used to analyse the data. The data were inputted using SPSS. Frequency table, cross-tabulation were involved to explore statistical relationship between variables. The differences was subjected to chi-square and statistical significance was set at $P \leq 0.05$

Results and Discussion

Table 1.1

Perception	**Agree (%)**	**Disagree (%)**	**Not Sure (%)**	**X^2**	**P-value**
Hospital					
UCH	180 (90.0)	4 (2.0)	16 (8.0)	76.5	0.0001

Adeoyo	56 (56.0)	24 (24.0)	20 (20.0)		

Table 1.2

Variables	SA (%)	A (%)	NS (%)	D (%)	SD (%)
Costing nursing care is attributing cost to nursing care	132(44.0)	120(40.0)	44(14.7)	0(0.0)	4 (1.3)
It is good to cost nursing care	136(45.3)	100(33.3)	36(12.0)	16(5.3)	12(4.0)
Cost should be given to independent nursing care	96(32.0)	132(44.0)	52(17.3)	16(5.3)	4 (1.3)
Costing nursing care can improve nursing image	128(42.7)	144(48.0)	16(5.3)	12(4.0)	0(0.0)
Costing care increases the salary structure of nurses	96(32.0)	104(34.7)	80(26.7)	16(5.3)	4(1.3)
NANDA can be used to cost nursing care	140(46.7)	104(34.7)	16(5.3)	12(4.0)	0(0.0)
Nursing care can be costed using numbers of days spent by patient	68(23.0)	84(28.4)	104(34.7)	36(12.2)	4(1.3)
Patient disease classification can be used to cost nursing care	32(10.7)	48(16.0)	160(53.3)	44(14.7)	16(5.3)
Nursing care can be costed using task performed by patient	68(23.0)	132(44.6)	80(27.0)	16(5.4)	0(0.0)
Standard of nursing can be improved by providing nursing procedural manual	88(29.3)	168(56.0)	32(10.7)	12(4.0)	0(0.0)
Costing nursing can improve the standard of nursing	96(32.0)	180(60.0)	24(8.0)	0(0.0)	0(0.0)

The results of the study conducted to determine the attitude of nurses towards nursing care shows that X^2 calculated (76.5) yielded a p-value of 0.0001 which is less than 0.05. This implies that there highly significant differences between the perceptions of nurses at University College Hospital and nurses at Adeoyo Maternity Hospital on the costing of nursing care. This means that nurses at UCH had a significant more positive attitude on the costing of nursing services when compared to their counterparts at Adeoyo Maternity Hospital.

Table 2.1

Involvement in costing nursing care	**Yes (%)**	**No (%)**	**Not Sure (%)**	**X^2**	**P-value**
Perception					
Agree	78	112	16		
Disagree	8	28	8	2.4	0.82
Not sure	18	20	8		

Table 2.2

Variables	Frequency	Percentage
Are you involved in nursing care?		
YES	32	10.8
NO	160	54.1
NOT SURE	104	35.1
Do you like the way nursing care is being costed?		
YES	20	6.8
NO	260	87.8
NOT SURE	16	5.4
Do you think costing care is important?		
YES	264	89.2
NO	16	5.4
NOT SURE	16	5.4
Do you have knowledge on costing nursing care?		
YES	20	6.8
NO	192	64.9
NOT SURE	84	28.4
Can costing care improve the standard of nursing?		
YES	244	82.4
NO	12	4.1
NOT SURE	40	3.5
Can costing nursing care increase the salary of nurses?		
YES	148	50.0
NO	32	10.8

NOT SURE	116	39.2
Can costing the nursing care improve the nursing profession?		
YES	212	71.6
NO	8	2.7
NOT SURE	76	25.7

On nurses involvement in costing their care, the results shows that X^2 calculated (2.4) yielded a p-value of 0.82 which is greater than 0.05. It implies that there is no significant relationship between perception and involvement of nurses on costing of nursing services. It can be said that nurses needed to be actively involves in cost determination/costing of services been rendered by them as the study clearly showed from the two hospital that nurses (10.8%) which were in minority are involved in nursing care.

Table 3

Methods	Frequency	Percentage
Nursing diagnosis list	172	57.3
Days spent by patient	40	13.3
Patient disease classification	16	5.3
Nursing task	72	24.0

On acceptable methods for costing nursing care, the study shows that 57.3% of the nurses prefer nursing diagnosis list, 13.3% prefer the number of days spent by patients. 5.3% prefer to use patient disease classification while 24.0% prefer using the nursing task performed on the patient. It is therefore can be inferred that the acceptable methods been used for costing is nursing diagnosis list.

Discussion

The results generated from this study showed that only 35.1% of the sampled population are not involved in costing of nursing care, 89.2% of the respondents believed that it is very important to cost nursing care. Other findings of interest from this study are that there were low knowledge of nursing cares costing among the respondents, most of them regard of nursing diagnosis list as a good method of costing nursing services and nurses at UCH had a

significantly more positive attitude on the costing of nursing services when compared to their counterparts at Adeoyo Maternity Hospital.

Conclusion

Costing nursing care is important to improve the image of nurses. This can improve the standard and salary and structure of nurses. The best method of costing nursing as seen in this study is to use the North American Nurses Diagnostic Association List (NANDA) or the tasks performed on a patient or the hours spent on the patient.

Recommendations

The suggestions that arises as a result of this study are that nurses should be educated and encouraged to improve their level of involvement in costing nursing care, costing nursing care is essential because it would enhance the performance of nurses in discharging their duties while relevant authority should look into aspects of costing nursing care as little attention is being paid to it presently.

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