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# Preoperative Patient Assessment Practices: A Survey of Kenyan Perioperative Nurses

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**Abstract:** *Background:* Patients undergoing surgery are at risk of developing complications related to surgery and anesthesia amidst heightened anxiety. The key roles played by perioperative nurses in surgery, mandate them to conduct preoperative patient assessment to identify and mitigate potential complications and to plan and deliver quality perioperative care. However, paucity of literature evidencing the practice is very low. *Objective* of this survey was to evaluate the assessment practices among Kenyan perioperative nurses. *Design:* A countrywide cross section descriptive survey. *Results:* Seventy two Kenyan perioperative nurses among conference attendees consented and participated in the survey. All the participants were registered nurses out of who only 13(18.1%) had trained in perioperative nursing specialty at diploma level. Out of the 13 trained, only 3(4.2%) had Bachelor of Science degree in nursing. Although preoperative patient assessment was reported to be practiced 58 (80.5%) it was apparent that the practice varied with individuals and institutions. Regarding the details of the assessment, general condition of patients, physical, physiological and psychological aspects come out strongly but not the emotional, spiritual and cultural aspects of the patients. Verbal and written reports were reported to be the main modalities of disseminating assessment feed backs to other nurses especially during shift handing over reports. Although preoperative assessment was undoubtedly reported to be beneficial in improving patients' care 42(58.3%) however, only 2 (2.8%) indicated its use in planning patients' care. *Conclusion:* In spite the findings, some glaring gaps likely to impact on quality of nursing care do exist in the preoperative assessment practices by perioperative nurses in Kenya.

**Keywords:** Perioperative Patient Assessment, Preoperative Ward Visits, Perioperative Nurses, Practice, Kenya

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## 1. Introduction

Patient-centered preoperative assessments by perioperative nurses gather critical data which when used to develop and implement nursing care plans optimizes patients' surgical care [18]. Effective preoperative patient assessment encompasses holistic patient's care aspect that includes physical, physiological, psychological, socio-cultural, emotional, spiritual and individual surgical needs [1, 2, 18]. Traditionally, preoperative ward visit to collect data at the patients' bedside or in the clinic in elective surgeries gave perioperative nurses time to directly observe and learn patients' behavior [3]. Perioperative nurses and patients got acquainted during the visits in such a way that patients' developed mutual trust that empowered them to express their concerns about the impending surgery, a process which also allayed their anxieties [1]. In emergency situations,

preoperative assessment is done when the patient is already in theatre because of time constraints. Nevertheless, patients' teaching and care plans and preparation must be as thorough as possible [4].

In the developed countries, preoperative patient assessment for elective surgery is mainly done in pre-surgical clinics by physicians, anesthetists and registered nurses. In Kenya, surgeons perform the assessment at the clinics or surgical wards. Perioperative nurses and anesthetists/anesthesiologists conduct the assessment independently through ward visits, the evening or night before surgery. Performing preoperative ward visits to conduct preoperative patient assessment is quite challenging. Limited nursing staffing in most surgical setups, changes in patients' surgical admission patterns, and the busy theatre schedules have made the timing of preoperative visits unpredictable and unfavorable among perioperative nurses [5], [6], [7], [8]. This explains the low documented

preoperative assessment practice among perioperative nurses as a result of lack of clinical evidence [9], [10], [11].

More than 234 million surgical procedures are performed globally each year [12]. According to [13], patients undergoing surgery are at high risk of developing complications including death relating to surgery and anesthesia. Patients’ Bill of Rights and Joint Commission for Accreditation of Health Care Organizations (JCAHO) dictates that all patients have a right to quality care [2]. In this regard, preoperative patient assessment is not only a strategy to mitigate abatable risks predisposition to surgical patients but a roadmap for enhancing care proficiency and patients’ surgical safety. Therefore, the aim of the survey was to assess preoperative assessment practices among Kenyan perioperative nurses.

## 2. Methodology and Tools

### 2.1. Design

This was a nationwide survey of preoperative assessment practices among perioperative nurses in Kenya.

### 2.2. Study Area

The survey was conducted at the 54<sup>th</sup> Annually Scientific Conference held from 1<sup>st</sup> to 5<sup>th</sup> November 2011 at Kenya School of Journalism situated in South C, Nairobi, Kenya. The conference was an annual event organized by the National Nurses Association of Kenya through the Theatre Chapter as a forum for engaging in matters regarding education and research, clinical practice and welfare related concerns. Usually the conference attracts nurses from various private, public and faith based hospitals in Kenya and other neighboring African countries like Tanzania, Uganda, Zambia, Malawi, and Mozambique among other African countries.

### 2.3. Study Population

All nurses who attended the conference.

### 2.4. Inclusion/ Exclusion Criteria

Only nurses working in Kenyan public, private and faith based surgical settings were eligible to participate. Nurses not working in Kenyan operating theatres were exempted from participation.

### 2.5. Sampling Technique Purposive

Purposive sampling was employed and 72 perioperative nurses among the conference attendees were censured.

### 2.6. Data Collection Procedure and Tools.

Self administered structured questionnaires with open and closed ended questions were administered by the researcher among perioperative nurses meeting the inclusion criteria as was programmed in the conference schedule and received

back.

### 2.7. Data Analysis and Management

Quantitative data from closed ended questions was analyzed using statistical package for social sciences (SPSS) version 17 and presented as frequencies. Qualitative data from the open ended question was grouped in themes and summarized as reported narrative.

### 2.8. Ethics

Ethical approval was obtained from Kenyatta National Hospital and University of Nairobi Ethical Review Board. Permission to engage the nurses during the conference was obtained from Chairman of National Nurses Association of Kenya through the Chairman of Theatre Chapter. Participation was voluntary and all the participants gave informed verbal and written consents before participation. All ethical principles were observed.

## 3. Results

### 3.1. Demographic Characteristics

Table 1. Demographics of the participants.

Demographic variable	No of respondents	Percentage
Gender		
male	23	31.9
Female	48	66.7
No response	1	1.4
Age in years		
25-34	31	43.1
30-44	27	37.5
45-59	7	9.7
No response	7	9.7
Professional qualification		
RN	50	69.4
RN + ORN	10	13.9
BScN + ORN	3	4.2
No response	9	12.5
Work experience		
> 1year	11	15.3
1-5years	38	52.8
6-10 years	13	18.1
< 10years	8	11.1
No response	2	2.8

Key: RN- Registered Nurse; ORN- Operating Room Nurses (perioperative nurses); BScN- Bachelor of Science Degree in Nursing.

### 3.2. Provinces

Kenya had 8 provinces currently subdivided into 47 counties after adoption of devolution system of governance in Kenya. Seven out of the eight provinces were represented

in the survey, Figure 1.

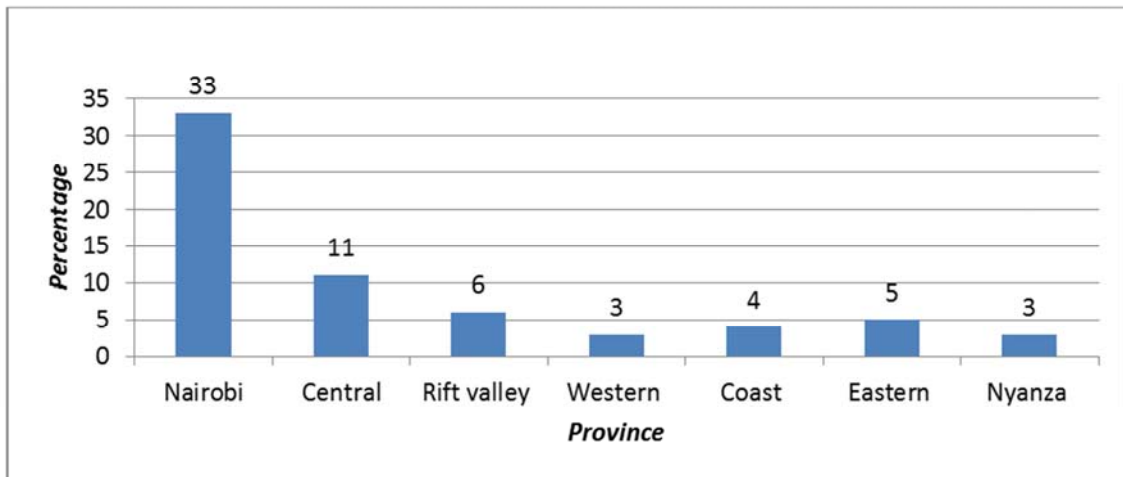


Figure 1. Provinces represented by the perioperative nurses.

### 3.3. Surgical Settings

The participants were from different institutions. Majority 44(61.1%) were from public institutions at various levels of health care delivery while 28(38.9%) were from various levels of private institutions including faith based hospitals, Table 2.

Table 2. Surgical setting represented by the perioperative nurses.

Surgical setting (n=72)	No. of respondents	Percentage
i. Referral hospitals and equivalent		
Public	14	19.4
Private	10	13.9
ii. Provincial hospitals and equivalent		
Public	3	4.2
Private	8	11.1
iii. District hospitals and equivalent		
Public	14	19.4
Private	0	0
iv. Others		
Public	13	18.1
Private	2	2.8
No response	8	11.1

### 3.4. Preoperative Patient Assessment Practices by Perioperative Nurses

Participants' response regarding preoperative assessment practices are as shown in Table 3.

Table 3. Preoperative assessment practices by perioperative nurses.

Preoperative assessment practices(n=72)	No. of respondents	Percentage
i. Do you practice preoperative assessment?		
Yes	58	80.6
No	14	19.4
ii. How frequent is preoperative assessment practice done?		
Always	38	52.8
Not always	20	28.8
No response	14	19.4
iii. Who does the assessment? (n=72)		
Theatre nurses	31	43.1

Preoperative assessment practices(n=72)	No. of respondents	Percentage
Surgeons, anesthetists and ward nurses	27	37.5
No response	14	19.4
iv. Where is the assessment done?(n=72)		
In the wards before surgery	37	51.4
In theatre	16	22.2
Other places other than theatre and wards	13	18.1
No response	6	8.3
v. What time is the assessment done?(n=72)		
No specific time allocated	36	50
Specific time allocated	28	38.9
No response	8	11.1
vi. Are there policies governing PPA practice?(n=72)		
Yes	34	47.2
No	30	41.7
No response	8	11.1
vi. Do you use a PPA models?(n=72)		
Yes	27	37.6
No	25	34.7
No response	20	27.7

### 3.5. Summary of Thematic Grouping of Responses (n=72) of Preoperative Patient Assessment Parameters, Table 4.

Table 4. Summarized narration of what is assessed by perioperative nurses.

Responses regarding what is assessed in preoperative patient assessment	
i. General	Patients' general condition, current and past medical/surgical history, previous surgeries and anesthesia experience and food or drug allergies. Suitability for anesthesia, anesthetic risks, comorbidities and surgical risks.
ii. Physical	Systematic head to toe assessment to rule out any scars, broken skin, assess operation site, pallor on the mucous, age, weight especially in children, hygiene and nutritional status
iii. Physiological	Vital signs to include temperature, pulse, respiration, blood pressure. Cardiac evaluation on patients who have cardiac related abnormalities and are in critical conditions at the time

Responses regarding what is assessed in preoperative patient assessment	
	of admission Physical preparation e.g. gowning, shaving, consent, laboratory investigations among other preoperative preparations and completing the preoperative checklists. Laboratory investigations to include, blood sugar and x-rays if required, oxygen saturations in blood (SPO <sub>2</sub> ), hemodynamic stability, hydration status and any other tests deemed necessary.
iv. Psychological	Assessing level of education and knowledge of the proposed surgery, mental status, psychological readiness for surgery. Discussing discharge plan to include someone to take patient home in day care surgery.

**3.6. Preoperative Assessment Information Documentation**

Only 23(31.9%) respondents indicated that preoperative assessment feedback was documented in all the relevant patients’ documents. The rest 49(76.1%) gave varying responses, Figure 2.

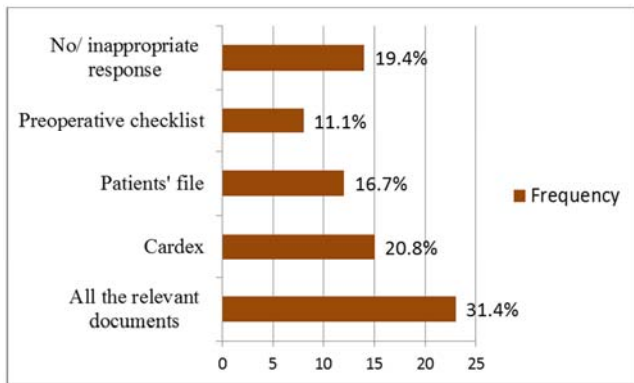


Figure 2. Responses on where assessment information is documented.

**3.7. Dissemination of Preoperative Patient Assessment Feedback**

Verbal and written reports are the main dissemination modalities used by the nurses to disseminate information especially when handing over from one shift to another, Figure 3.

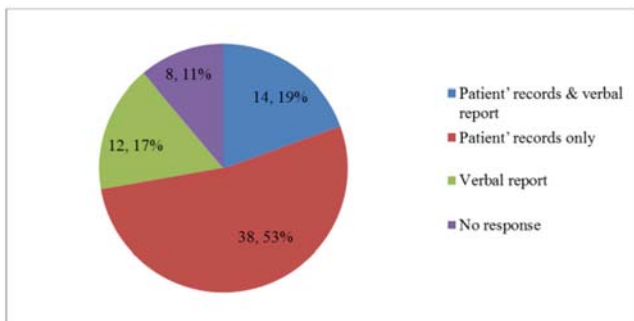


Figure 3. How others get assessment feedback (n=72).

**3.8. Preoperative Assessment Information Utilization**

Forty two (58.3%) participants reported that the

assessment report is used to facilitate patients’ care, only 2 (2.8%) indicated that the information is mainly used to plan patients’ care. Other responses indicated use as protocol 2(2.8%), as baseline information 4(5.6%), 5 (6.9%) to make judgment while 17(23.6%) gave no response.

**3.9 Benefit(s) of Preoperative Patient Assessment**

Most participants 66(91.7%) agreed that the assessment was beneficial to the patient while 6(8.3%) did not respond. The cited benefits included to improve direct patient care 56(77.8%), to improve surgical care 8(11.1%) and to correct abnormalities encountered 2(2.8%).

**4. Discussion**

Majority of the participants were mainly female 48(66.7%, n=72). This can be attributed to the fact that nursing was originally a female dominated career both in Kenya and globally. The female dominance exists even in the operating theatres [14]. Regarding age distribution, 58(80.6%) were aged between 25-44 years old and 49 (68.1%) had less than five years working experience. This can be explained by the high attrition rate of experienced nurses to the developed countries and work related stress in theatre among other reasons [15].The results showed that very few nurses working in theatre were trained in perioperative nursing 13(18.1%, n=72).At the time the survey was undertaken, there were only 175 ORNs and 12 BScNs trained nationally in perioperative nursing according to the nursing regulatory body register of 2011. Moreover, there were only two perioperative nursing training schools nationwide. The two schools had annual training capacity of not more than 20 perioperative nurses and had recently been established. A similar survey done in Nigeria revealed same findings and recommended retention of the nurses and mandatory continuous professional education programs training for perioperative nurses to keep abreast with the new trends in perioperative nursing practice [16].

Seven out eight provinces (currently 47 counties) were represented in the study. Notably, one of the provinces (North Eastern province) had no representation because at the time the survey was undertaken, the province was experiencing ethnic clashes. The nurses may have encountered either security challenges impending conference attendance or may have been very busy theatre attending to the clash victims. The participants were from both public and private surgical settings including faith based institutions ranging from major referral hospitals to small private hospitals.

Although preoperative assessment was reported to be practiced 58(81.9%, n=72), the practice was varied and congruent to a similar assertion [17]. Various responses were elicited in response to an open ended question poised regarding what was assessed during preoperative patient assessment. It emerged that patients’ general condition, physical, physiological, and psychological aspects were

assessed in tandem with the best practices [1, 2,18]. However, spiritual and emotional aspects did not stand out clearly as well as the distinct role of the perioperative nurse during the assessment. These results reflect challenges facing preoperative assessment practices as have already been cited [7, 8]. Moreover, the concept preoperative ward visit which is a conduit for conducting the assessment is not well understood among perioperative nurses [19-22].

It is encouraging that at least 23(31.9%) participants indicated documenting preoperative assessment data in all the relevant documents among other responses. Verbal and written reports were the main dissemination modalities used by perioperative nurses to pass over the information to colleagues. Although 42 (58.3%) reported that the assessment report is used for improving patient care, only 2 (2.8%) indicated using the information to plan patients' care. This response poses a dilemma of Hawthorn effect or a pertinent gap in practice. As a matter of fact assessment information should form the baseline data for implementing and evaluating perioperative surgical interventions [23, 24]. Majority of the respondents agreed that conducting preoperative assessment is beneficial to both patients and the institution and has been supported [1,2, 13, 18, 24].

## 5. Conclusion

Preoperative assessment practices among perioperative nurses require mainstreaming and restructuring to enhance care proficiency.

## Recommendation

There is need to enhance professionalism in perioperative nursing practice through

- Increasing perioperative nursing specialty training and sustained updates in practice through continuous professional development initiatives.
- Retention of the trained nurses in the operating theatres to improve and maintain standards of quality practice
- Need to reinforce preoperative patient assessment practices as prerequisite for planning quality care interventions
- Fostering structured preoperative assessment frameworks that will include spiritual, cultural and emotional aspects of holistic patient care crucial during surgery.
- Creating supportive theatre environment to enhance feasibility of sustained preoperative assessment practices through informed policies and improved nursing staffing ratios.

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## Conflict of Interest

The author declares non existence of conflict of interest.

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