NURSES' KNOWLEDGE, ATTITUDE AND PRACTICE IN THE MANAGEMENT OF ACUTELY ILL ADULT PATIENTS, IN THE GENERAL WARDS AT KENYATTA NATIONAL HOSPITAL.

THESIS SUBMITTED IN PARTIAL FULFILMENT FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE (CRITICAL CARE NURSING) OF UNIVERSITY OF NAIROBI

VALERIE JEPCHIRCHIR SUGE
H56/72064/08

OCTOBER, 2010

DECLARATION

I declare that this thesis is the result of my original work and that it has not been submitted either wholly or in part to this or any other university for the award of any degree.

Name: **Valerie J. Suge, BScN**

Signed: _____

Date: 26/10/2010

SUPERVISORS' APPROVAL

This is to certify that this thesis entitled "Nurses' knowledge, attitude and practice in the management of acutely ill adult patients, in the general wards at Kenyatta National Hospital" has been submitted in partial fulfilment for the award of the degree of Masters of Science in Nursing of the University of Nairobi with our approval as internal supervisors:

1. **Mr. Anthony Ayieko Ong'any,**
   BScN, Msc. Clinical Psychology
   Lecturer,
   School of Nursing Sciences
   University of Nairobi
   P.O. Box 19676 – 00202 Nairobi.
   Signed: _____
   Date: 25/10/10

2. **Mrs Rysper Eve Rajula,**
   MPH, MBA, BscN
   Lecturer, School of Nursing Sciences
   University of Nairobi
   P.O. Box 19676 – 00202 Nairobi
   Signed: _____
   Date: 25/10/10

ACKNOWLEDGEMENT

I am grateful to my supervisors Mr. Ayieko and Mrs. Rajula for their advice and guidance throughout the study period.

I wish to acknowledge with much gratitude Mrs. Kirui, Dr. Misango and the entire ICU and Medical –Surgical lecturers for their positive criticism and editing of this thesis.

I wish to thank my husband Paul and daughter Lauryn for their support and encouragements, and my entire families for their continuous prayers and support.

I also wish to extend my gratitude to Kenyatta National Hospital Ethical and Research Committee, The Ministry of Education, Science and Technology and more so The Kenyatta National Hospital management for granting me the authority to conduct this study.

Last but not least, I wish to thank all the respondents for agreeing to participate in this research, my fellow classmates and all those in one way or another played a role in this study

Table of Contents

DECLARATION i
SUPERVISORS' APPROVAL ii
ACKNOWLEDGEMENT iii
LIST OF FIGURES vi
LIST OF ACRONYMS viii
OPERATIONAL DEFINITIONS ix
ABSTRACT 1
CHAPTER ONE 3
NTRODUCTION 3
.1 INTRODUCTION 3
.2 BACKGROUND INFORMATION 4
.3 PROBLEM STATEMENT 5
.4 JUSTIFICATION 6
.5 EXPECTED BENEFITS OF THE STUDY 7
.6 RESEARCH OBJECTIVES 8
.7 RESEARCH QUESTIONS 8
CHAPTER TWO 11
2.0 LITERATURE REVIEW 11
2.1 INTRODUCTION 11
2.2 CRITICAL CARE NURSING 11
2.3 MANAGEMENT OF AN ACUTELY ILL PATIENT OUTSIDE ICU SETTING. 14
2.4 KNOWLEDGE ON THE MANAGEMENT OF ACUTELY ILL ADULT PATIENT IN THE GENERAL WARDS 15
2.5 PRACTICE WITH RESPECT TO THE MANAGEMENT OF ACUTELY ILL ADULT PATIENT 16
2.6 THE CARE PATHWAY FOR AN ACUTELY ILL PATIENT 17
2.7 SUMMARY OF LITERATURE REVIEW 19
HAPTER THREE 20
.0 MATERIALS AND METHODS 20
1 STUDY DESIGN AND TIME FRAME 20
2 DESCRIPTION OF STUDY AREA 20
3 STUDY POPULATION 21
5 ELIGIBILITY 22

3.6 STUDY TOOLS 23
3.7 SELECTION OF STUDY SUBJECTS: 23
3.10 DATA COLLECTION, CLEANING AND DATA ENTRY 24
3.11 DATA ANALYSIS AND PRESENTATION 25
3.12 MINIMISING BIASES AND ERRORS 25
CHAPTER FOUR 27
RESEARCH FINDINGS 27
CHAPTER FIVE 45
DISCUSSION 45
CHAPTER SIX 51
CONCLUSIONS 51
APPENDIX I: CONSENT FORM 55
APPENDIX 11: THE QUESTIONNAIRE 56
APPENDIX III: FOCUSED GROUP DISCUSSION GUIDE 60
APPENDIX IV – APPROVAL DOCUMENTS 63

LIST OF FIGURES

Figure 1: Distribution of respondents in the wards 27
Figure 2: Education level of respondents in KNH wards 28
Figure 3: The responsibility held by respondents in their wards 29
Figure 4: Proportion of respondents who have attended critical care training 30
Figure 5: Proportion of respondents who need additional training 31
Figure 6: Modality of nursing carried out by respondents 32
Figure 7: Nurse-patient ratio 33
Figure 8: Proportion of respondents who have been involved in cardiopulmonary resuscitation. 34
Figure 9: Types of routine observations carried out to acutely ill patients 36
Figure 10: Frequency of observation for general patients 37
Figure 11: Frequency of observations for acutely ill patients 38
Figure 12: Proportion of respondents who are conversant with cardiopulmonary resuscitation 40
Figure 13: Rating of acute care in respondents' wards 41
Figure 14:Knowledge on management of acutely ill patients 44

LIST OF TABLES

Table 1: Selection of study subjects from general medical and surgical wards 23
Table 2: Length of service at the Kenyatta National Hospital 28
Table 3: Criteria used by respondents to classify patients for acute nursing care 35
Table 4: Table showing the parameters respondents use to detect acute patients 35
Table 5: Type of investigations carried out to acutely ill patients 40
Table 6: Correlation between the duration respondents have worked in Kenyatta National Hospital 41
Table 7: Table showing the proportion of respondents whose wards have written policies/guidelines 42
Table 8: Cross tabulation of the presence of policies on acute care versus involvement in acute care 42
Table 9: Chi-square test for relationship between presence of policies and involvement in acute care 43

LIST OF ACRONYMS

ABCD's	:	Airway, Breathing, Cardiac massage and Definitive therapy
ACLS	:	Advanced Cardiac Life Support
ACN	:	Assistant Chief Nurse
AACCN	:	American Association of Critical Care Nurses
ATLS	:	Advance Trauma Life Support
BLS	:	Basic Life Support
CPR	:	Cardio – Pulmonary Resuscitation
CCU	:	Critical Care Unit
DH	:	Department of Health
DNR	:	Do Not Resuscitate
ER	:	Emergency Rooms
FGD	:	Focus Group Discussion
GCS	:	Glasgow Coma Score
ICS	:	Intensive Care Society
ICU	:	Intensive Care Unit
KMTC	:	Kenya Medical Training College
KNH	:	Kenyatta National Hospital
NCK	:	Nursing Council of Kenya
NHS	:	National Hospital Survey
DH	:	Department of Health
NCEPOD	:	National Confidential Enquiry into Patient Outcomes and Death
NICE	:	National Institute for Clinical and Health Excellence
NPSA	:	National Patients Safety Agency
SNO	:	Senior Nursing Officer
SONS	:	School of Nursing Sciences
SOP	:	Standard Operating Procedures
SPSS	:	Statistical Package for Social Sciences
UON	:	University of Nairobi

OPERATIONAL DEFINITIONS

Acutely ill patient: Patient who is at high risk for actual or potential life threatening health problems also referred as critically ill (Gupta, 2005).

Acute care: Acute care is a pattern of health care in which a patient is treated for a brief but severe episode of illness as a result of an accident, trauma or during recovery from trauma (Craft et al, 2002)

Adult patient: One above the age of thirteen years admitted in either the adult medical or surgical ward as used in this study

General Ward: Non – specialised surgical or medical wards of KNH, admitting Patients above 13 years of age as used in this study

Patient outcome: Used in this study to refer to the positive end result/ outcome of nursing interventions

Suboptimal care: Lack of knowledge regarding the significance of findings on airway dysfunction, breathing and circulation that result in aspects of care being missed, misinterpreted and mismanaged (McQuillan , 1998)

ABSTRACT

Introduction: Care of the acutely ill patient has become increasingly challenging due to demands from external sources to measure the quality and appropriateness of care provided (Ridley,1998). The more critically ill the patient is the more vulnerable and unstable he becomes, thereby requiring intense nursing care to ensure optimum care.

Nurses' knowledge and attitude towards an acutely ill patient is generally considered to be one of the basic factors contributing to the administration of a total therapeutic nursing care. Earlier studies showed that management of acutely ill patients admitted to general wards was suboptimal (McQuillan, 1998). Other studies also suggested that doctors and nurses working in general wards may not have some of the skills required to manage patients with complex needs (Chaboyer et al, 2004).

Objective: The study sought to determine nurses' knowledge and practice on the management of acutely ill adult patients and to establish the nurses' attitudes and perceptions on the management of these patients at the general wards of Kenyatta National Hospital.

Methodology: This was a cross sectional descriptive study conducted at KNH general wards among nurses over a period of 6 months, from January 2010 to June 2010. Quantitative data was collected using self-administered structured questionnaires while qualitative data was obtained through a focus group discussion with the subjects. Purposive sampling was used to select fourteen medical and surgical wards. From each of the selected wards, proportional random allocation was used to select study subjects. Qualitative data obtained was coded through content analysis according to themes, and SPSS ® software used to analyse quantitative data.

Results and Findings: From the study, it was noted that the respondents were not adequately knowledgeable on certain aspects of care of the acutely ill patients. A majority of the nurses had not attended any critical care course (83%). Further, 32% of nurses reported not being conversant with CPR procedures for the acutely ill patients. Of the respondents who were involved in the CPR process, 12% (n = 50) reported not being conversant with the process.

Conclusion and Recommendations:

It was found that majority of nurses were not adequately knowledgeable on management of acutely ill adult patients and a significant proportion were not competent in their practice. There is need for KNH management to train and periodically update staff on basic and advanced cardiac life support courses.

Further, a systematic program of orientation and continuing education/refresher program should be implemented to ensure quality care provision and sustain the interest of the nursing professionals in the practice field.

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

Care of the critically ill patient has become increasingly challenging due to demands from external sources to measure the quality and appropriateness of care provided (Ridley,1998). The more critically ill the patient is the more vulnerable, unstable and complex he becomes, thereby requiring intense nursing care to ensure optimum care. Quality care provision is therefore the responsibility of every nurse and requires vigilance as well as knowledge of the principles and standards of care in the management of the acutely ill patient.

Critical care nursing is that speciality within nursing that deals with human responses to life threatening problems. Critically ill patients also referred to as acutely ill patients are those patients who are at high risk for actual or potential life threatening health problems (Gupta, 2005).

The scope of practice in critical care nursing focuses on the professional conduct of the nurse, which is seen as a dynamic process defined by three essential components: The acutely ill patient, the nurse and the care environment, (American Association of Critical Care Nurses [AACCN], 2006).

However, Staff caring for patients in the general ward setup should also have competencies in monitoring, measurement, interpretation and prompt response to acutely ill patient appropriate to the level of care they are providing.

Kenyatta National Hospital (KNH) is a referral institution which has for the last two decades witnessed a growing demand for health care services. Increased public awareness of their rights as clients, has led to heightened expectations resulting to demand for high quality of care and a shift of focus to the kind of services provided by clinical health care workers notably the nurses.

According to Bradley et al (2001), the nurse's knowledge and attitude towards a patient is generally considered to be significant factors contributing to the administration of a total

therapeutic nursing care. Furthermore, the author explains that these attitudes are to a great extent, the result of exposure to environments, educational background, and experiences. If outcomes are to be improved, prompt and accurate assessment immediately followed by competent and efficient treatment is essential.

1.2 BACKGROUND INFORMATION

Caring is one of the most valuable attributes nursing has to offer humanity through enhancement of human dignity. However, nurses are currently working in a health service where there are increasingly fluid boundaries between general nursing care and acute care (Gibson, 1997). Highly dependent patients with complex requirements are increasingly being cared for in the ward areas. As the Nursing environment improves, there is need for consistent standards of care irrespective of where the patient is located within the hospital.

During the 1990s, the AACCN envisioned a new paradigm for clinical practice. The vision was to transcend the current thinking of practice as a series of tasks to a health care system driven by the needs of patients in which nurses make optimal contributions to patient's outcome. Of great importance was the ability to articulate nurse's unique contribution in caring for critically ill patients regardless of where the care is delivered (Hardin & Kaplow, 2005)

In a general ward set up, the nursing environment is ever-changing for both the nurse and the patient. At one time the nurse may be required to deal with the usual routine activities of the ward and in the next minute the environment may change, requiring her to provide emergency care. The patient similarly, may be haemodynamically stable and the next minute his condition may change requiring acute intervention.

Both the quality and efficiency of care delivered to an acutely ill patient in a ward setting are linked directly to nursing services provided. Nursing services along with all other services provided by other health workers must therefore be evaluated to assure that nursing makes an optimal contribution in the attainment of optimal patient outcome and fulfilment of the institutional objectives (Chaboyer et al, 2004).

It has been suggested that clinical staff working in wards outside critical care settings may not have adequate skills required to effectively manage patients with acute or complex needs. (Intensive Care Society [ICS], 2002)

Acute care can be administered in ambulances, emergency room (ER), Critical care units (CCU) general wards and elsewhere, where a patient is being managed by medical and nursing personnel to restore a person to good health.(Darwent et al, 2000).Treatment and care of the acutely ill patients should therefore take into account their needs and preferences. People with an acute illness should, if appropriate, have the opportunity to make informed decisions about their care and treatment, in partnership with their health care professionals.

1.3 PROBLEM STATEMENT

Patients who are admitted to hospital believe that they are entering a place of safety, where they, their families and carers, tend to believe that they will receive the best possible care. They feel confident that, should their condition deteriorate, they are in the best place for prompt and effective treatment. Yet there is evidence to the contrary (NICE, 2005).

Patients who are, or become, acutely unwell in hospital receive suboptimal care. This may be because their deterioration is not recognised or despite indications of clinical deterioration, it is not appreciated, or acted upon rapidly. Communication and documentation are often poor, Experience might be lacking and provision of critical care expertise, including admission to critical care areas, delayed (McQuillan, 1998).

A small follow-up study done by KNH Critical Care Unit (CCU) management team on patients discharged to the wards showed that the mortality rate of the patients was high. It was reported that for every 5 patients who were transferred to the general wards, only two recovered well to be discharged home (Mogi, 2008).

Both Turnock (2005) and Dyer (2004) report that patients receiving acute care in general wards have difficulties compared to when they were in dedicated critical care units. The management of general ward patients who develop acute illness is often sub-optimal. Studies done in the United States of America (USA) have shown that up to 54% of acutely ill patients admitted to general wards are suboptimal (McQuillan, 1998). Cardiac arrests occurring in the

ward indicated that patients are preceded by many hours of untreated physiological deterioration (Franklin & Mathew, 1994).

There is evidence that ward staff fail to recognize the significance of changes in vital signs. This can result in a late referral of patients to critical care units. (NICE, 2007).Further, it has been suggested that doctors and nurses working in acute wards may not have some of the skills required to manage patients with complex needs. (ICS, 2002, Chaboyer et al, 2004).

In the recent past, the public criticized the poor quality of patient care in the general wards of KNH (Daily Nation, 14 December 2007 pg 14; KNH Public relations office, 2007). This public outcry over deteriorating health care services has been blamed on the nurses. This often results into litigation against the nurses and the employing organization (East African Standard, 7 July 2007 pg 2; E.A. Standard, 23 July 2007 pg 14). The institutional image generally and specifically that of the nursing profession is therefore tainted. Nurses on the other part become demoralized with consequences on the quality of care provided (KNH public relations office, 2007). Some studies done in Australia, America and United Kingdom have linked suboptimal care to nurses' knowledge and skills including clinical judgment, early recognition and decision making (Bird & Wallis, 2002; McCaughan et al, 2002; Huber et al 2000). However, this may not be the case at KNH since no study has been done.

1.4 JUSTIFICATION

Quality nursing care is a key phenomenon towards the achievement of optimal patient outcomes in the management of the acutely ill patient (Gupta, 2005). One of the most difficult aspects of nursing care is the identification of patients who are acutely ill or those who are physiologically deteriorating and are most likely to benefit from intensive care focused at positive patient outcomes. These positive outcomes benefit the patients themselves, the hospital and the society in general. A better understanding of nurses' knowledge, attitude and practice forms the basis for providing corrective feedback and development of policies.

Suboptimal care of critically ill patients in the ward set-up has been associated with high mortality. Identifying some of the factors that are associated with suboptimal care can thus form a foundation for developing interventions aimed at providing proper care to critically ill

patients in the ward. There is thus need to conduct studies on the knowledge, attitudes and practices of nurses on the management of acutely ill adult patient in the general wards, which is the essence of this research.

1.5 EXPECTED BENEFITS OF THE STUDY

The findings of this study will be used to draw important and relevant lessons on nurse's identification and management of acutely ill adult inpatients both in KNH and other public hospitals.

The findings will be useful in the formulation of policies, protocols, and procedures on the care of acutely ill patient outside critical care settings, in terms of factors to consider in identification, and the immediate actions to take.

The information will also be relevant for teaching and learning purposes as well as, for publication to stimulate further research on related issues.

1.6 RESEARCH OBJECTIVES

1.6.1 Main Objective

To determine nurses' knowledge, attitudes and practice, on the management of an acutely ill adult patient in the general wards at KNH.

1.6.2 Specific Objectives

1. To determine the nurses knowledge on the processes used in identification and management of an acutely ill adult patient in the general wards at KNH;
2. To determine the nurses' practice in relation to identification and management of an acutely ill or acutely deteriorating adult patient in the general wards at KNH;
3. To explore the attitudes of nurses in the wards on the management of acutely ill adult patient in the general wards at KNH.
4. Identify factors that influence the management of an acutely ill adult patient in the general wards at KNH;

1.7 RESEARCH QUESTIONS

- Do nurse's knowledge, attitude and practice influence the management of acutely ill adult patient admitted to general wards?
- Are general ward nurses able to identify and manage an acutely ill adult patient?
- What factors influence the management of acutely ill adult patients admitted to general wards?

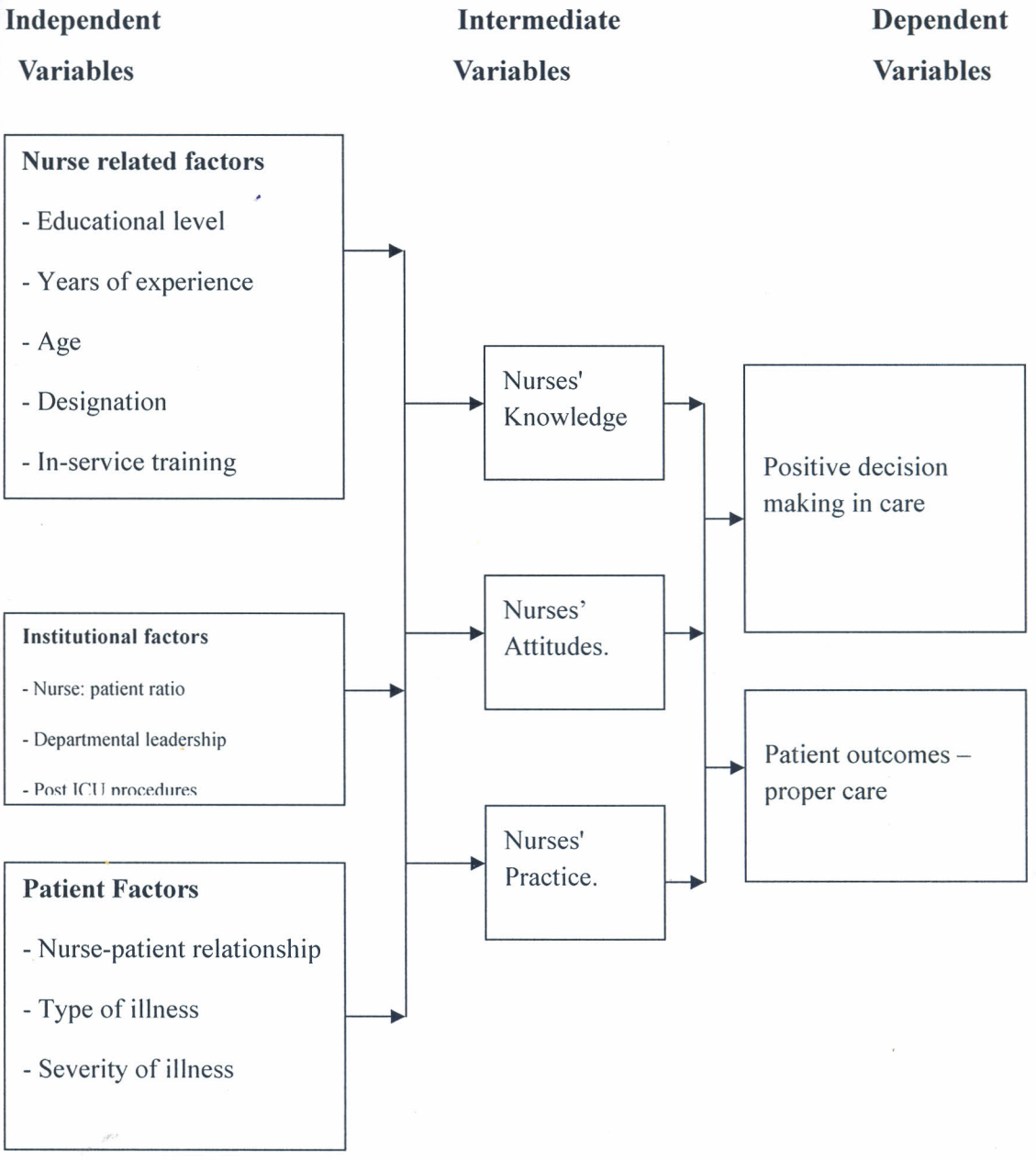
1.8 THEORETICAL FRAMEWORK

This research study was guided by Benner's Theory of Excellence and power in clinical nursing practice. Benner emphasized the difference in knowing how, a practical knowledge that may elude precise abstract formulations, and knowing that, which lends itself to theoretical explanations (Benner, P 2006).

Benner also identified nine domains of critical care nursing practice to include, diagnosing and managing life to sustain physiological functions in unstable patients, managing crisis, providing comfort measures for the acutely ill patient, caring for the patient's families, preventing hazards in a technological environment, facing death and end of life issues, communicating and negotiating multiple perspectives, monitoring quality and managing breakdown and finally using the skilled know how of clinical leadership and coaching.

In her assumptions, she has described humans as integrated, holistic beings. Nursing is described as a caring relationship, "Caring is to help, primarily because caring sets up the possibility of giving help and receiving". Health on the other hand has been defined as that which can be assessed, whereas well being is the human experience of health and wholeness.

1.9 CONCEPTUAL FRAMEWORK



Nurses' knowledge, attitudes and practice contribute highly towards their positive decision making in the care and management of the acutely ill patient.

Adequate knowledge on who an acutely ill patient is and competence in performance of skills and other procedures towards the management of these patients are key factors towards provision of good nursing care, good practice, and hence optimum patient outcomes.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

Improving the care of critically ill patients has been identified as a major objective by the current health system in the 21st Century. Wright (2000) suggests that, for this reason, clinical staff need to acquire new knowledge and skills to meet the demands of a rapidly changing patient profile. However, recent studies indicate that ward – based clinical staff are not receiving the education and support required to meet this demand (McKenna, 2002).

2.2 CRITICAL CARE NURSING

2.2.1Critical Care Units

Critical care units have evolved over the last four decades in response to medical advances. Florence Nightingale in the early years of the nursing profession developed the concept of clustering the most acutely ill patient as far back as the 1800. In 1960s, technologic development s allowed for more accessible monitoring of electrocardiogram, arterial and central venous pressures, pulmonary artery pressures, and arterial blood gases (ABGs).

By the 1970s, the ICU was a standardized unit in most general hospitals worldwide; and since that time technical advances have continued at a rapid pace, bringing improved monitoring capabilities and new strategies to manage life – threatening problems.

A critical care unit (CCU) is defined as the unit in which comprehensive care of a critically ill patient is carried out. Referred also as intensive care unit (ICU), it is a unit designed to meet the special needs of acutely and/or critically ill patients (Lewis et. al, 2007). It is a specially equipped facility staffed by skilled personnel to provide effective and safe care for dependent patients with life threatening or potentially life threatening problems, injuries or complications.

The national critical care capacity has risen in the recent past years but the pace is not in keeping with the greater demand for critical care beds. Some of the factors contributing to these greater demands include advances in anesthesia, the success of complex surgical techniques, sedentary life style leading to various cormorbids like hypertension and diabetes and finally the increasing age of the population (Goldfrad et al, 2000; Parker et al, 1998).

2.2.2 The Critically ill Patient

A critically ill patient also referred to as an acutely ill patient is that patient who is at high risk for actual or potential life threatening health problems (Gupta, 2005).This patient is generally admitted to the ICU for various reasons. First, the patient may be physiologically unstable, requiring advanced and sophisticated clinical judgements by the nurse or physician. Second, the patient may be at risk for serious complications and frequent and often invasive assessments. Third, the patient may require intensive and complicated nursing support related to the use of intravenous (IV) polypharmacy (e.g. neuromuscular blockade, sedation, thrombolytics, drugs requiring titration) and advanced biotechnology (ventricular assist devises, mechanical ventilation, intracranial pressure monitoring, continuous renal replacement therapy and hemodynamic monitoring).

Edbrooke et al (1997) also noted that complex treatments previously undertaken only within critical care environments are now being seen in some general ward setting.

2.2.3 Characteristics of acutely ill patients

Patients commonly treated in ICU include those with respiratory distress, myocardial ischemia or infarction. Also admitted are patients with acute neurologic impairment or those receiving care after cardiac surgery or other major surgeries like: post craniotomy and major organ transplantation. Any person with a life threatening condition is also considered an acutely ill patient. Such patients are of the following categories:

- Patients with acute respiratory failure
- Patients with acute myocardial infarction
- Patients with cardiac arrhythmias
- Patients with heart block
- Patients having cardiac tamponade
- Patients in severe shock
- Unconscious patient
- Patients with acute renal failure
- Patients with polytrauma and Multiple Organ System Failure/Multiple Organ Dysfunction Syndrome
- Patients with severe burns

- Patients with medical emergencies e.g. sepsis, diabetic ketoacidosis, drug overdoses or poisonings, thyroid, adrenal, or hematologic crises, (Lewis et. al, 2007).

2.2.4 Scope of nursing practice of the acutely ill patient.

Nursing practice in critical care is highly challenging and complex. The critically ill patient is a complex person in a complex environment. The nursing care and, identification of the individual patient's response to illness as well as to treatment is a big challenge. The nurse who monitors these patients continuously needs to have sound knowledge, skill and careful judgement. She should follow a systematic approach in assessing, planning, implementing and evaluating the care provided to the patient.

According to the Nursing Council of Kenya's scope of practice (2007), the nurse's focus during management of a critically ill patient is in giving specialised care to these patients. The acutely ill patient needs support for vital physiological functions in an atmosphere where dignity and respect is maintained. The nurse should at all times utilize the nursing process in provision of nursing care. The nurse taking care of the acutely ill patients shall:

- Perform a comprehensive quick patient examination, make diagnosis , plan and implement care as appropriate
- Diagnose cardio- pulmonary arrest and carry out resuscitation procedures as appropriate
- Take and analyse the ECG strip and carry out appropriate measures
- Prepare to transfer and admit a patient to the ICU if need be
- Perform/ assist in special procedures e.g. intubation, insertion of central venous pressure cannula, measure CVP, carry out blood analysis; interpret results and take the necessary interventions
- Plan and implement care on patients requiring special care e.g. underwater seal drainage, suction, open heart surgery, renal transplant, neurosurgery, continuous renal replacement therapy
- Assist during physiotherapy of the critically ill
- Ensure that infection control practices are upheld during patient care
- Counsel patient and family and refer as appropriate
- Assist during diagnostic procedures e.g. Echocardiogram and arteriogram.
- Plan and participate in the rehabilitation of the critically ill
- Assess patients with burns, carry out scoring, calculate and administer fluid therapy

2.2.5 Competencies required of a critical care nurse

The American Association of Critical Care Nurses (ACCN) defines critical care nursing as that specialty dealing with human responses to life threatening problems and thus requires an in- depth knowledge of anatomy, physiology, pathophysiology, pharmacology and advanced biotechnology.

The critical care nurse provides ongoing assessment and early recognition and management of complications while fostering healing and recovery. Appropriate actions taken by these nurses can prevent many complications and contribute to good patient outcomes. The nurse must also be able to provide psychological support to the patient and family. To be effective the nurse must be able to communicate and collaborate effectively with all health team providers (e.g. physician, dietician, physiotherapist, occupational therapist).

The Nursing Council of Kenya requires that each nurse maintains and continually improves his /her competence by participating in continuing education (Standards of Nursing Education and Practice, 2007). NCK further stipulates that each nurse shall engage in a minimum of 20 hrs of continuing education in a relevant professional discipline and assume responsibility for their own professional development and sharing knowledge, skills and information with others.

2.3 MANAGEMENT OF AN ACUTELY ILL PATIENT OUTSIDE ICU SETTING.

Research studies have highlighted that the care of the acutely ill patient in the ward or the provision of continuity of care for the patient transferred from ICU is not sufficient enough to bring about optimal patient outcomes.

Complex treatments previously undertaken only within critical care environments are now being seen in some ward areas, and the dependency levels of patients are rising. (Lyons et al, 2000).

Furthermore, acutely ill and highly dependent patients being routinely cared for in general wards has resulted in a change in the care needs of ward patients and an increased level of patient dependency (Haines et al, 2001).

However, with the greater demand for ICU bed capacity, there is a shortage of critical and high – dependency beds, with varying admission and discharge criteria. These results in inconsistencies in quality and continuity of care for acutely ill patients who deteriorate while in the general wards and those transferred from critical care units to the general ward beds (NHS Executive, 2003).

Wright (2000) suggests that, for these reasons, clinical staff need to acquire new knowledge and skills to meet the demands of a rapidly changing patient profile. However, recent studies indicate that ward – based clinical staff are not receiving the education and support required to meet this demand (Mc Kenna, 2002).

2.4 KNOWLEDGE ON THE MANAGEMENT OF ACUTELY ILL ADULT PATIENT IN THE GENERAL WARDS

McQuillan et al (1998) suggested that the care and management of a high percentage of acutely and critically ill patients on general wards was suboptimal. (In this case, 54% of patients studied).

Suboptimal care was described as a lack of knowledge regarding the significance of findings relating to dysfunction of airway, breathing and circulation. This in turn resulted in aspects of care being missed, misinterpreted and mismanaged. And consequences for patients included increased morbidity and mortality rates and requirement for ICU admission.

In 1999, the US Department of Health convened an expert group to develop a framework for the future organization and delivery of critical care. It incorporated a hospital – wide approach, extending beyond the boundaries of ICUs and impacting on the delivery of acute care as a whole (DH, 2000). The Department of Health and Modernization Agency reiterated that patients at risk of deteriorating or recovering from critical illness were not always well managed. Once again, substandard care was seen in failures to optimize essential functions – airway, breathing and circulation, oxygen therapy, fluid balance and monitoring. Organizational problems, inadequate supervision, failure to seek advice and poor communication compounded the situation and significant deficits in fundamental skills and knowledge were also major factors.

Furthermore, the National Confidential Enquiry into Patient Outcomes and Death (NCEPOD, 2005) identified the decreasing number of hospital beds and the increased number of acutely ill patients in hospital. The enquiry argued it was important to recognize that acute care in today's NHS depended largely on hard work and dedication of all grades of staff.

McGloin and Singer (1999) identified patients unexpectedly dying on general medical and surgical wards, or requiring admission to ICU. They found that 317 of 477 hospital deaths in their study occurred in general wards. The authors concluded that patients with obvious clinical indicators of acute deterioration before the event, died without appropriate action being taken (NPSA, 2007).

2.5 PRACTICE WITH RESPECT TO THE MANAGEMENT OF ACUTELY ILL ADULT PATIENT

Nursing practice responds to clients' actual, emerging and potential health or nursing care needs and demands throughout the developmental stages of the clients' life cycle along the health – illness – continuum. Nursing practice is based on the scientific nursing process and incorporates the aspect of evidence – based nursing practice through research

The management of general ward patients who develop critical illness is often suboptimal. There many reasons identified to contribute towards these. Some of the reasons include; a lack of a systematic approach to these patients (Cullinane et al 2005), overburdened ward staff and deficiencies in medical and nursing training (Smith et al, 2007).

Cardiac arrests occurring in the general ward patients are often preceded by many hours of untreated physiological deterioration (Franklin and Matthew 1994). This was also cited by Kanse et al (2004) who said that many patients show signs of physiological deterioration before admission to ICU, before a cardiac arrest and even during death. If timely and appropriate detection by medical and nursing staff of the physiological deterioration through early recognition of a hypo-tensive crisis, decreased Glasgow coma and immediate action taken, it is likely that the patient will benefit.

More recently, NICE (2007) published guidelines on the recognition and the response to acutely ill adults in hospitals. The NICE guidelines coincided with the NPSA (2007) report

after an analysis of 1,804 serious incidents reported to the national reporting and learning system that resulted in patient death. Following an expert review of the above study, it was concluded that 576 of the patients who died could be interpreted as potentially avoidable and related to patient safety issues. (NPSA, 2007).Some of the 425 of these incidents occurred in general hospital wards.

The Agency's report focused on 107 of the 425, and 64 were related to patient deterioration that was not recognized or not acted upon. The 43 involved a problem with resuscitation (not recognizing the cardiac arrest or not calling for the resuscitation team or not initiating resuscitation) after a cardiac arrest.

2.6 THE CARE PATHWAY FOR AN ACUTELY ILL PATIENT

According to NICE Clinical guidelines (2006), monitoring is essential for acutely ill patients for diagnostic, investigative and therapeutic purposes. Monitoring aims at;

- Measuring the key indices for the underlying pathophysiology
- Arriving at a diagnosis
- Helping in decision making on treatment regimen
- Alerting the critical care health team members to the patient's condition
- Measuring progress and deterioration in patients' condition, thereby helping in assessment of prognosis.

As a routine, 4hourly monitoring of vital signs (Temperature, Blood Pressure, respiration and pulse) should be taken for all adult patients admitted to hospital.

Patients with temperatures above 39degrees centigrade or below 36, Pulse below 40 or above 110b/min, Respirations above 24b/min and a blood pressure reading of below 50 diastolic and above 150mmhg systolic should have continuous monitoring of the parameters if facilities are available or monitoring at least every 15 minutes where the facilities are minimal.

Below are revised NICE clinical guidelines developed by the Center for Clinical Practice (2007) :

Adult patients in a general ward setting, including patients in the emergency department for whom a clinical decision to admit has been made should have physiological observations recorded at the time of their admission or initial assessment.

As a minimum, the following physiological observations should be recorded at the initial assessment and as part of routine monitoring; - Heart rate, respiratory rate, systolic blood pressure, level of consciousness, oxygen saturation and temperature.

In specific clinical circumstances during physiological deterioration additional monitoring should be considered: for example:-Blood gas analysis (BGA), hourly urine output, biochemical analysis, such as lactate, blood glucose, base deficit, arterial PH and pain assessment depending on the patient's diagnosis.

A clear written monitoring plan that specifies which physiological observations should be recorded and how often; physiological observations should be recorded and acted upon by staffs who have trained to undertake these procedures and understand their clinical relevance. The frequency of monitoring should increase if abnormal physiology is detected.

Staff caring for patients in the general ward setup should have competencies in monitoring, measurement, interpretation and prompt response to acutely ill patient appropriate to the level of care they are providing. Education and training should be provided to ensure staff has these competencies. If the team caring for the patient considers that admission to or discharge from a critical care is clinically indicated, then the decision should involve both the teams caring for the patient.

The formal handover of care should include:

a) A summary of critical care stay and vice versa , including diagnosis and treatment
b) Monitoring and investigation plan
c) A plan for ongoing treatment, including drugs and therapies, nutrition plan, infection status and any agreed limitations of treatment.
d) Physical and rehabilitation needs.
e) Psychological and emotional needs.
f) Specific communication or language need.

Goldhil and Sumer, (1998) also recommended that, knowledge of a simple, practical approach on the basic life support skills to patients who change condition can be life saving.

Other recommendations from the NSPA (2007) report on the principles of management of an acutely ill adult patient includes:- Better recognition of patients at risk of or who have experienced deterioration, appropriate monitoring of vital signs, accurate interpretation of clinical findings, calling for help early and ensuring that it arrives and finally provision for training and skills development.

Another publication by NPSA (2007) recognized that underlying causes for the deaths are very complex. They include; under staffing and workload issues, to education and training inadequacies of the nursing staff.

Finally, Allen (2004) discussed how the nurses changing role enables them to be in constant contact with patients, arguing that nurses are in a prime position to identify problems at an early stage by using the systematic patient assessment as part of the nursing process. This implies that appropriate treatment can be identified quickly, potentially saving a patient's life.

2.7 SUMMARY OF LITERATURE REVIEW

The current health care climate demands clinical effectiveness and value for human life. Quality care provision has important benefits to the Patient, Nurses and the health care institution as a whole. Numerous factors from the various studies done have been shown to influence the care of an acutely ill adult patient in the general wards. Most studies acknowledge that no single variable influences the management of an acutely ill patient and that different variables have different effects on the care provided. It is therefore important for this research to be conducted to determine whether the nurses' Knowledge, attitude and practice affect the management of these patients as an additional study designed to add on to the already existing body of knowledge.

CHAPTER THREE

3.0 MATERIALS AND METHODS

3.1 STUDY DESIGN AND TIME FRAME

This was a cross-sectional descriptive study that sought to establish and describe nurses' knowledge, practice and attitude on the management of acutely ill adult patients at the selected general wards of Kenyatta National Hospital. The study was executed over a period of six months between the months of January 2010 and July 2010.

3.2 DESCRIPTION OF STUDY AREA

The study was conducted at KNH general wards. KNH is the largest National Referral and Teaching Hospital in East and Central Africa, established in 1901 with a bed capacity of 40 beds then and up to 1800 beds currently. It is located in Nairobi Province about 3 kilometres from the Nairobi Central Business District.

KNH serves as a primary health facility for the communities around it. It is the teaching hospital for the University of Nairobi's (UON) college of health sciences, the Kenya medical training college (KMTC), and Baraton University only to mention a few institutions.

The hospital has different departments according to specialities of medicine and surgery. At the moment KNH has a total of 50 wards of which 20 are General adults' wards. 14 General medical and surgical wards were purposively selected at random and this included 4B,4C,4D,5A,5B,5D,7A,7B,7C,7D,8A,8B,8C,and 8D. At a given day, the hospital hosts in its wards between 2500 and 3000 patients.

KNH has a 21 ICU bed capacity which does not meet the demands for the acutely ill patients taking the nature of admission of patients to the hospital. KNH is a referral hospital however it admits walk in patients and also caters for the admission of mass emergencies due to road traffic accidents and other traumatic episodes. For these reason, most of the acutely ill patients requiring ICU admission are nursed in the general medical and surgical wards.

3.3 STUDY POPULATION

The study population included all nurses working in the general medical and surgical adult wards at the time of study. It also included the nurse managers in this case the senior nursing officers (SNO) involved in the daily managerial and administrative issues of the respective wards and the Assistant chief nurses (ACN) of surgical and medical departments.

There are a total of 285 nurses currently working in the general wards of KNH, according to information from the Assistant Chief Nurse (ACN) Surgical unit. Each of the wards had an average of 20 nurses.

3.4. SAMPLE SIZE DETERMINATION AND SAMPLING METHOD

Sample size was estimated using the formula as recommended by Fisher et al 1998.

$$n = \frac{z^2 pq^2}{d^2}$$

Where n = Desired sample size (when population is greater than 10,000)

z = Standard normal deviation which is equal to 1.96 corresponding to the 95% confidence limit.

p = Prevalence of the issue under study, this was estimated at 30% based on anecdotal evidence since no studies had been done on these subjects.

Hence p = 0.3

q = 1-p

d = confidence limit of the prevalence (p) at 95% confidence interval

= 1 - 0.95 = 0.05

Degree of accuracy desired for the study is hence set at 0.05

Substituting these figures in the above formula:

Thus, $n = \frac{1.96^2 \times 0.3 \times 0.7}{0.05^2}$

$n = 323$

Since the target population was less than 10,000, the sample size was adjusted using the following formula:

For population less than 10000

$$nf = \frac{n}{1+(n/N)}$$

nf = Desired sample size

n = Sample size of population more than 10,000 (calculated as 323)

N = Estimate of population size in KNH medical and surgical wards (285)

Therefore nf $\frac{285}{1+(285/323)} = 151.6 \approx$ **152 nurses.**

Purposive sampling of KNH general wards was done. All the nurses who met the inclusion criteria were included.

A list of all nurses in the participating wards formed the sampling frame and the individual nurses formed the sampling units. On obtaining a list of all the general wards, all paediatric and other specialised units were excluded from the subsequent sampling.

3.5 ELIGIBILITY

3.5.1 Inclusion criteria

Study subjects met all the following criteria;

a) They had been working with KNH for more than 1 year
b) They were all nurses on duty and working in the selected general wards of KNH at the time of study
c) Nurses who gave informed consent

3.5.2 Exclusion Criteria

Potential subjects with any of the following characteristics were excluded from the study.

a) All nurses who were away from duty on either annual, maternity, or Study leave
b) Nurses away from duty for any other reason at the time of study.
c) Nurses working in specialised surgical units like Burns unit, ICU, ENT ward among others.
d) Failure by respondents to consent.
e) Nurses who had worked in KNH for less than 1 year

3.6 STUDY TOOLS

Quantitative data was collected using a structured self administered questionnaire administered by trained research assistants.

Qualitative data was collected using focus group discussion sessions conducted in one of the 14 adult general wards selected for the study. The FGD results were used to corroborate findings from the questionnaire. A question guide was developed by researcher to guide in the focus group discussions.

3.7 SELECTION OF STUDY SUBJECTS:

Adult medical and surgical wards were randomly selected. A list of nurses in the selected wards was obtained from their respective ward in charges. From the sample size determined, proportional allocation of study subjects based on the number of staff working was carried out. The number of nurses selected from each ward was made proportionate to the total number of nurses from the selected adult general wards. The number of study subjects per ward is illustrated in Table 1 below.

Table 1: Selection of study subjects from general medical and surgical wards

WARD	**4B**	**4C**	**4D**	**5A**	**5B**	**5D**	**7A**
No, of nurses in ward	20	19	25	17	17	19	22
Proportion to ward size	$\frac{20}{285} \times 152$	$\frac{19}{285} \times 152$	$\frac{25}{285} \times 152$	$\frac{17}{285} \times 152$	$\frac{17}{285} \times 152$	$\frac{19}{285} \times 152$	$\frac{22}{285} \times 152$
Sample size to draw	11	10	13	9	9	10	12
WARD	**7B**	**7C**	**7D**	**8A**	**8B**	**8C**	**8D**
No, of nurses in ward	22	16	21	22	21	23	21
Proportion to ward size	$\frac{22}{285} \times 152$	$\frac{16}{285} \times 152$	$\frac{21}{285} \times 152$	$\frac{22}{285} \times 152$	$\frac{21}{285} \times 152$	$\frac{23}{285} \times 152$	$\frac{21}{285} \times 152$
Sample size to draw	12	9	11	12	11	12	11

Eight (8) nurses were randomly selected from one of the medical and surgical wards (4D), to participate in one FGD. These participants were exempted from filling in the questionnaires.

3.8 RECRUITMENT AND TRAINING OF RESEARCH ASSISTANTS

Study assistants were recruited from KNH. The three research assistants were qualified BScN nurses who were fluent in spoken and written English. The assistants were trained on the objectives of the study and all data collection tools; study questionnaires and the focused group discussion topic guide. The need for reliable information was emphasised.

3.9 PRE - TESTING AND PILOTING

Pre-testing of the questionnaire was done to ascertain any spelling mistakes, correctness of the questions or ambiguity of questions. The principal researcher and study assistants conducted a pilot study in 5C, one of the specialized medical- surgical wards dealing with ENT conditions.

The purpose of which was to fine tune the data gathering methods in order to heighten both sensitivity and reliability and determine overall feasibility of the study. It was found to have a high Cronbach's alpha of 0.91 indicating that it was reliable in terms of internal consistency. Reliability coefficient above 0.70 is considered satisfactory (Polit & Hungler, 1999).

3.10 DATA COLLECTION, CLEANING AND DATA ENTRY

The researcher and three (3) study assistants collected data using a standardized self administered questionnaire designed for the study. The questionnaire was in English language and originated from the researcher. It comprised of fixed response items and on some items a summated scale on an interval of 5 to rate nurses' opinion on the various aspects in regard to their opinions on issues of knowledge, attitude and practice in the management of the acutely ill adult patient in the general wards of KNH.

The questionnaire covered the following themes; the demographic characteristics of the study population, knowledge, skills and practice issues pertaining to the management of the acutely ill patient in the general wards. Finally, nurse' opinions, challenges and perception on their knowledge, attitude and practice during the management of the acutely ill adult patient admitted to the general wards. Each subject took at least 10 – 15 minutes with the questionnaire.

At the end of each day of data collection, incomplete and poorly filled questionnaires were discarded. In total, 12 potential study subjects who were approached refused to consent to

participate and were thus excluded from the study. Completed questionnaires were entered into a data base created using SPSS software.

Focus group discussion notes were also compiled. Hand written summaries and shorthand notes were transcribed immediately for consistency and accuracy.
Data collection, cleaning and study summary was completed in 6 weeks.

3.11 DATA ANALYSIS AND PRESENTATION

Open ended questions were coded before data entry. Data from the structured questionnaires was analysed using SPSS® software and presented in descriptive form using frequency tables, cross tabulation tables, bar charts, frequency polygons, pie charts and histograms. Chi square for significance was used and the level of significance fixed at 0.05. Multivariate analysis was also used to show relationship between variables as appropriate.

3.12 MINIMISING BIASES AND ERRORS

The following were followed to minimize bias:

1. The study utilised all standardised questionnaires in the same language (English).
1 Research assistants were trained on study objectives, methodology and specifically on the questionnaires and other tools used in the study, emphasis made on the need for reliable information.
2. Study tools were pre-tested, piloted and refined in ward 5C, before final production.
3. All respondents were explained to by the research assistants the importance of completely filling in the questionnaires and returning it intact.
4. Data collection tools were examined at the end of each day to ascertain completeness and correctness of information.

3.13 ETHICAL CONSIDERATIONS.

Approval to conduct research in KNH was sought from and granted by the Ethical and Research Committee of the Kenyatta National Hospital

Authority to conduct research in Nairobi was sought and a clearance permit granted by the Government of Kenya through the Ministry of Education, Science and Technology.

Informed consent was sought from and obtained from potential study subjects before they were enrolled into the study.

All information obtained was treated with utmost confidentiality and used for study purposes only.

CHAPTER FOUR

RESEARCH FINDINGS

Socio-demographic Profile

A total of 122 nurses were interviewed during the study period. 56.3% were from medical wards while 43.8% were from surgical wards. Of all the respondents, 76% were female while 24% were male.

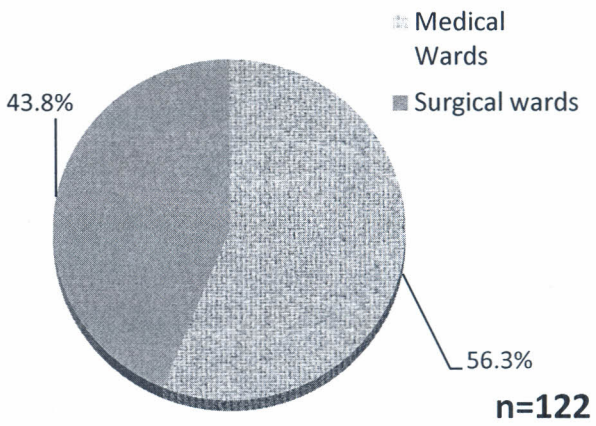


Figure 1: Distribution of respondents in the wards

Educational Level

A large proportion of respondents (65.2%) were trained nurses at the diploma level. 28.3% of respondents stated that their highest level of training was at certificate level. Less than 7% of respondents were trained at or beyond bachelors' degree level as illustrated in the graph below

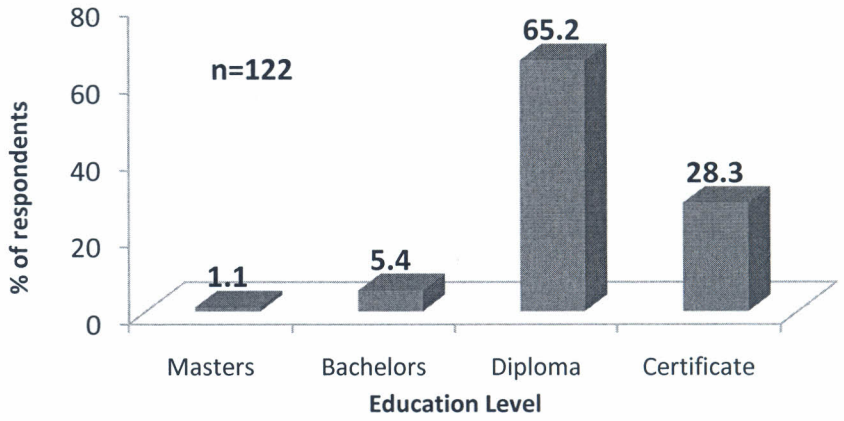


Figure 2: Education level of respondents in KNH wards

Duration worked in the hospital and ward

Most of the respondents had worked in the hospital for a mean duration of 10.3 years (SD 6.4) and for a mean duration of 4.7 years (S.D. 3.0 years).

Table 2: Length of service at the Kenyatta National Hospital

Descriptive Statistics

	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
Duration worked in KNH	28	1	29	945	10.27	6.414
Duration worked in Ward	13	0	13	427	4.69	3.025

Designation of respondents

Table 3: Table showing the various designations of respondents

Designation	Frequency	Percent
Senior Nursing Officer	3	2.2%
Nursing Officer I	32	26.1%
Nursing Officer II	46	38.0%
Nursing Officer III	8	6.5%
Enrolled Community Nurse	33	27.2%
Total	**122**	**100.0%**

26% of respondents reported that they were nursing officers I, 38% nursing officers II and 7% nursing officers III. 27.2% of respondents were enrolled community nurses while only 2.2% were senior nursing officers.

Nurses' responsibility

A majority of respondents were direct patient care providers (96.7%). 2.2% were administrators and 1.1% were health educators.

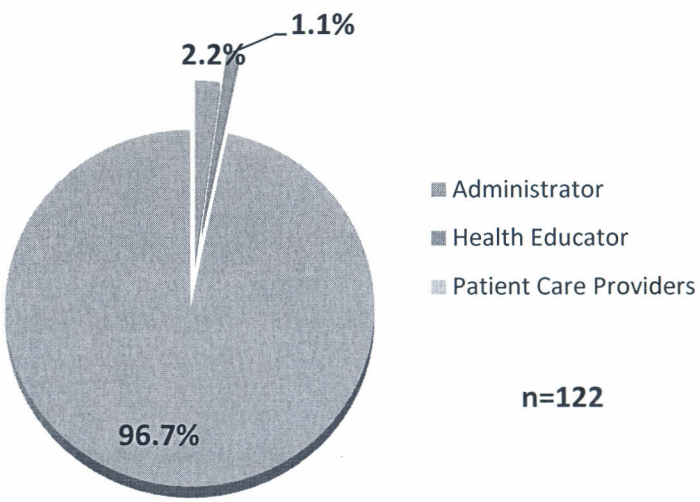


Figure 3: Responsibility held by respondents in their wards

Respondents who have attended training in critical care

A majority (83%) of nurses have not attended any formal training in critical care / acute care nursing.

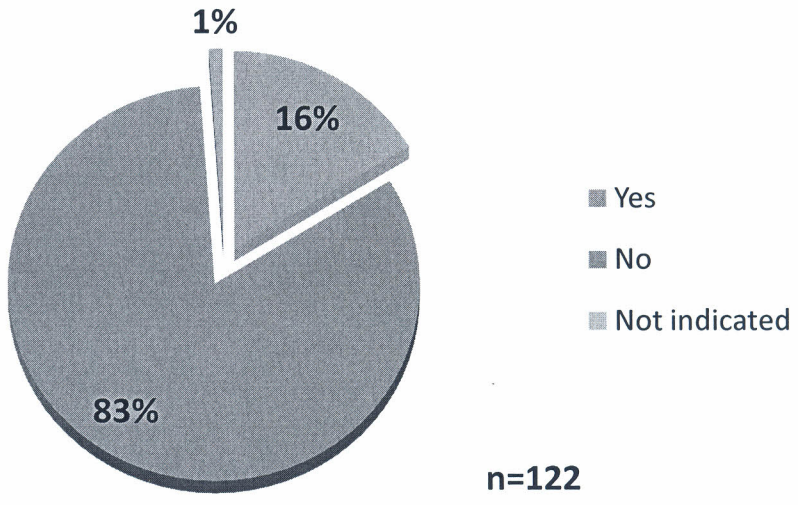


Figure 4: Proportion of respondents who have attended critical care training

Table 4: Number of respondents who have attended training in the general wards.

		Attended training	
		Yes	No
		Count	Count
TYPE OF WARD	Medical Ward	5	45
	Surgical Ward	15	53
Pearson Chi-Square Tests	Chi-square	1.866	
	df	1	
	Sig.	.172	

More respondents trained on critical care were from surgical wards. However there was no statistical significant difference in the proportion of respondents trained between the medical and surgical wards (=1.86, p=0.172).

Need for Training in Acute Care

86% of respondents stated that they needed additional training to be able to work more effectively. Specific topics/areas where respondents stated needing additional training are indicated in table below.

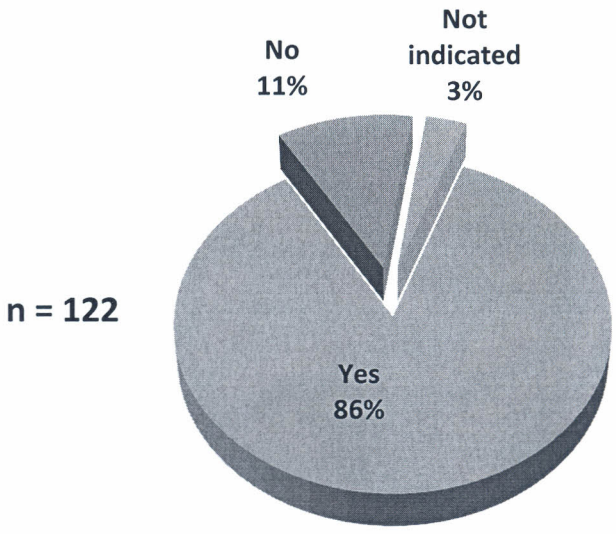


Figure 5: Proportion of respondents who need additional training

Table 5: Training areas respondents would wish to be trained on.

Training Area	Frequency	Percent
Accident and emergency nursing	8	7.5%
ACLS	17	15.9%
BLS	33	30.8%
BSN	1	0.9%
Cardiac Nursing	2	1.9%
CPR	5	4.7%
Critical Care Course	23	21.5%
ICU management	7	6.5%
Neurosurgical nursing	2	1.9%
Operation of Cardiac monitors	2	1.9%
Pre/Post Operative Care	4	3.7%
Other	3	2.8%

Modality of Nursing

Half of respondents practiced a mixed mode of nursing between primary and team nursing in their wards. 32.6 % of respondents practiced primary nursing while 12% practiced team nursing. Only 5.4% of respondents practiced a mixed primary and functional nursing.

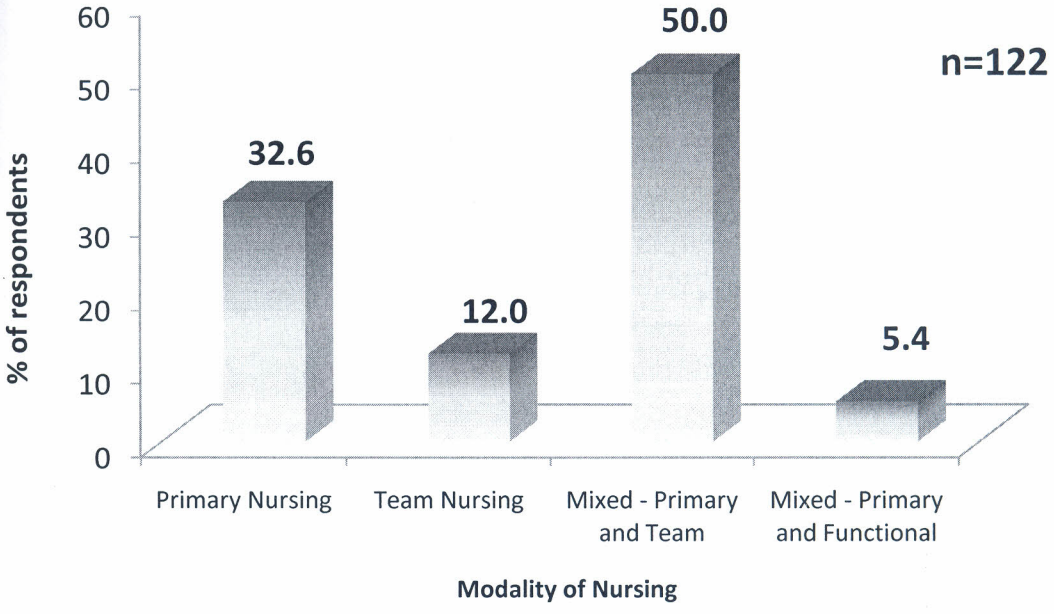


Figure 6: Nursing modality as practiced by the respondents in the wards

Nurse - patient ratio

About half of respondents reported having a nurse-patient ratio of 1:20. 27% of respondents had a nurse – patient ratio of 1:30 while 10.9% had a nurse – patient ratio of 1:40.

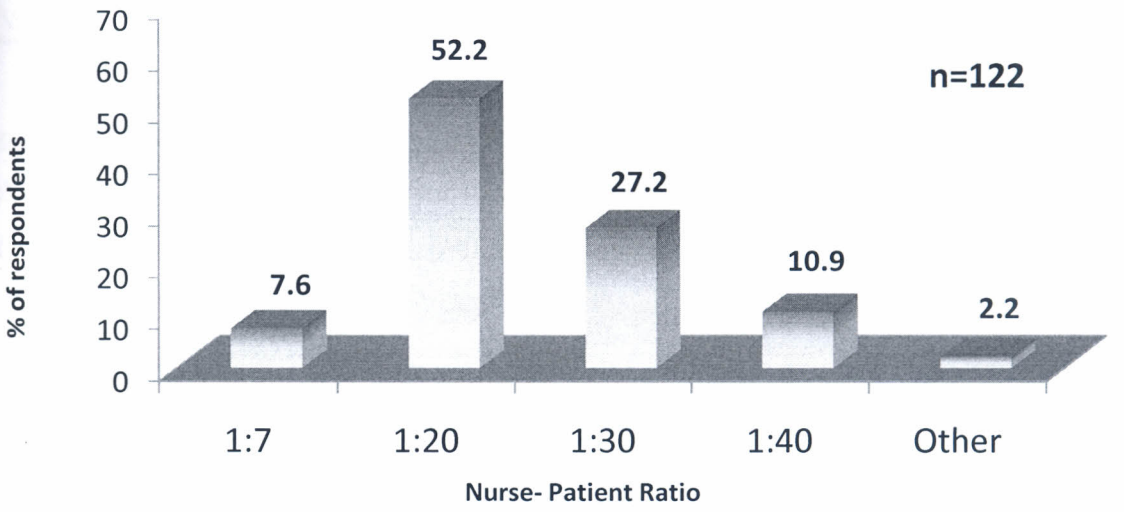


Figure 6: Bar graph showing the nurse-patient ratio

Nurse - Patient Ratio * Involved in CPR Cross tabulation

Table 6:Chi – square tests

			Involved in CPR		
			Yes	No	Total
Nurse - Patient Ratio	1:7	Count	4	5	9
		% of Total	3.3%	4.3%	7.6%
	1:20	Count	41	23	64
		% of Total	33.7%	18.5%	52.2%
	1:30	Count	15	19	33
		% of Total	12.0%	15.2%	27.2%
	1:40	Count	9	4	13
		% of Total	7.6%	3.3%	10.9%
	Other	Count	1	1	2
		% of Total	1.1%	1.1%	2.2%
Total		Count	70	52	122
		% of Total	57.6%	42.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.152[a]	4	.386
N of Valid Cases	122		

In spite of a larger proportion (34%) of respondents with less patient ratio (1:20) reporting involvement in CPR, there was no statistical significant difference in their involvement with CPR and the patient ratio (=4.152, p=0.386).

Involvement in Cardiopulmonary Resuscitation

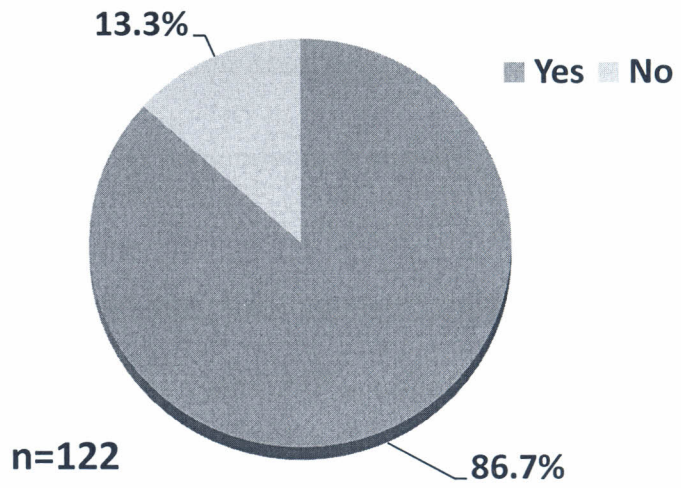


Figure 7: Proportion of respondents who have been involved in cardiopulmonary resuscitation.

A large proportion of respondents (86.7%) reported having been involved in at least one cardiopulmonary resuscitation in the past one month. There was no statistical difference between the proportion of respondents from medical and surgical wards.

Criteria used by staff to classify patients for acute nursing care

35% of respondents reported using respiratory distress as a criterion for identifying patients needing acute care. Other criteria were unconsciousness (22%), patients on total nursing care (13%), patients with medical emergencies (4%) and newly transferred patients (1%). A quarter of respondents did not indicate the criteria.

Criteria	Frequency	Percent
Unconsciousness	26	21.7%
Respiratory distress	42	34.8%
Total Nursing Care	16	13.0%
Medical emergency	5	4.3%
Newly transferred patient	1	1.1%
Not indicated	31	25.0%
Total	**122**	**100.0%**

Table 3: Criteria used by respondents to classify patients for acute nursing care

Parameters that are used for detecting acute care patients

Respondents reported using vital signs (12.0%), respiratory distress (34.8%), pain (1.1%) and Glasgow Coma Scale (7.6%) as illustrated in the table below as parameters that helped them to detect an acutely ill patient or one who's physiologically deteriorating.

Table 4: Table showing the parameters respondents use to detect acute patients

Parameter	Frequency	Percent
Vital signs	**15**	12.0%
Respiratory distress	**42**	34.8%
Pain	**1**	1.1%
GCS Score	**9**	7.6%
Not indicated	**54**	44.6%
Total	**122**	**100.0**

Routine observation made on acutely ill patients

Blood pressure was the most common observation being conducted on acutely ill patients (23.4%). 20.1% of respondents reported taking pulse, 19.8% reportedly took temperature while 18.8% of respondents took respiratory rate. Blood sugar and physical assessment were reportedly conducted by 2.0% of respondents while 4.0% took SPO2 readings for their patients.

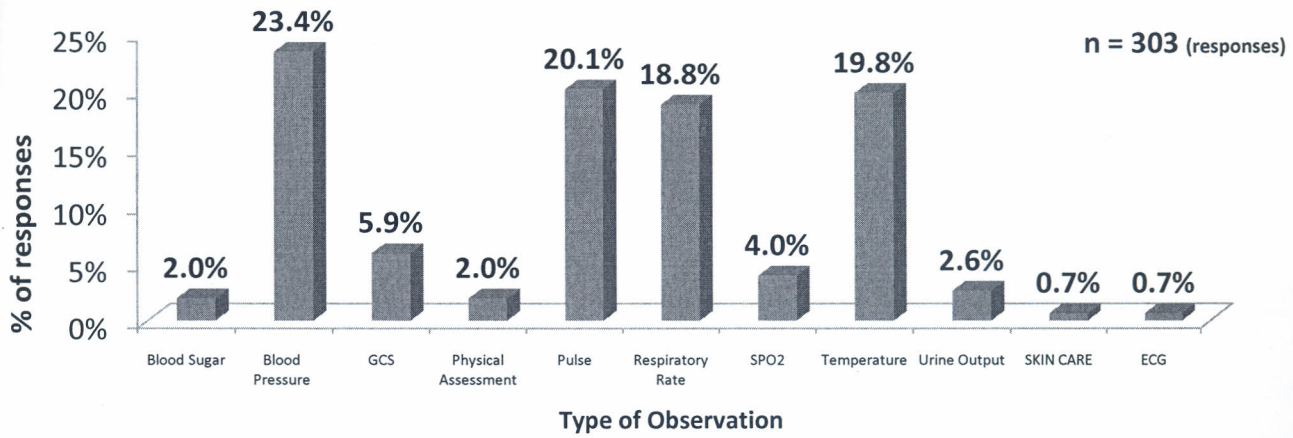


Figure 8: Bar Chart illustrating types of routine observations carried out to acutely ill patients

Frequency of observation for general patients

37.9% of respondents reported making vital observations on general patients twice a day. 23% of respondents reported making observations once daily, while 16.1% reported making observations four times every day. 13.8% of respondents reported making observations three times a day while 9.2% stated other frequencies.

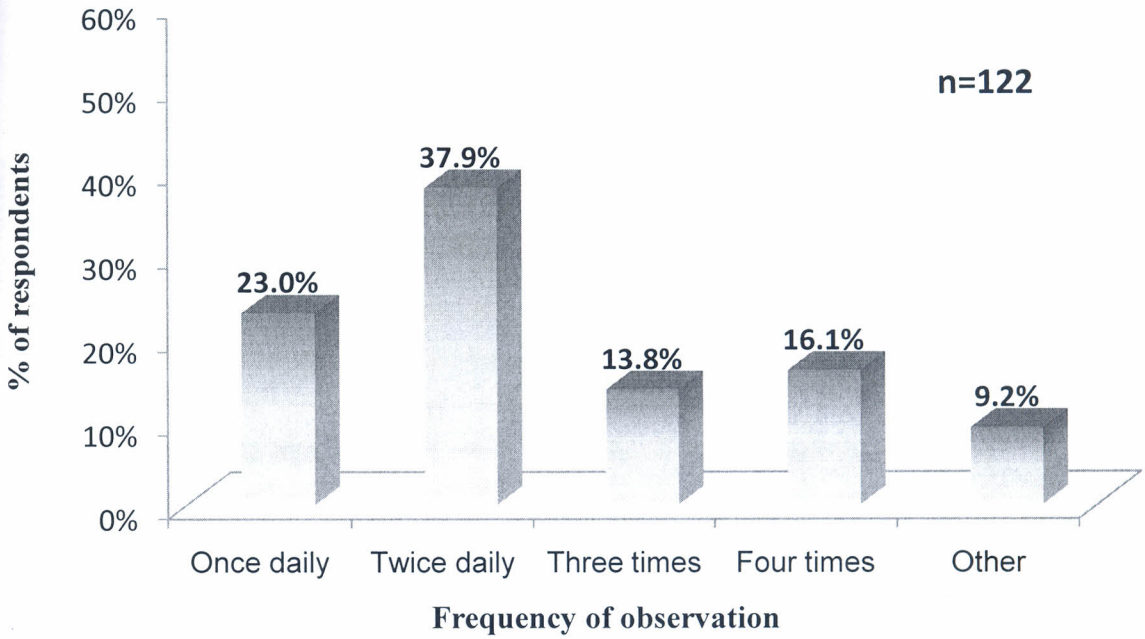


Figure 9: Bar graph showing the frequency of observation for general patients

Correlations

		Nursing Modality	Frequency of Observation
Nursing Modality	Pearson Correlation	1	.045
	Sig. (2-tailed)		.682
	N	122	118

When the relationship between the various nursing modalities and the frequency of making observations was examined, there was no significant correlation between the two variables (P=0.45, p= 0.68)

Frequency of observation for acutely ill patients

43.5% of respondents reported doing 4-hourly observations. About a quarter of respondents reported doing observations every 30 minutes while 18.5% did them 2-hourly. 6.5% of respondents reported doing observation as may be required.

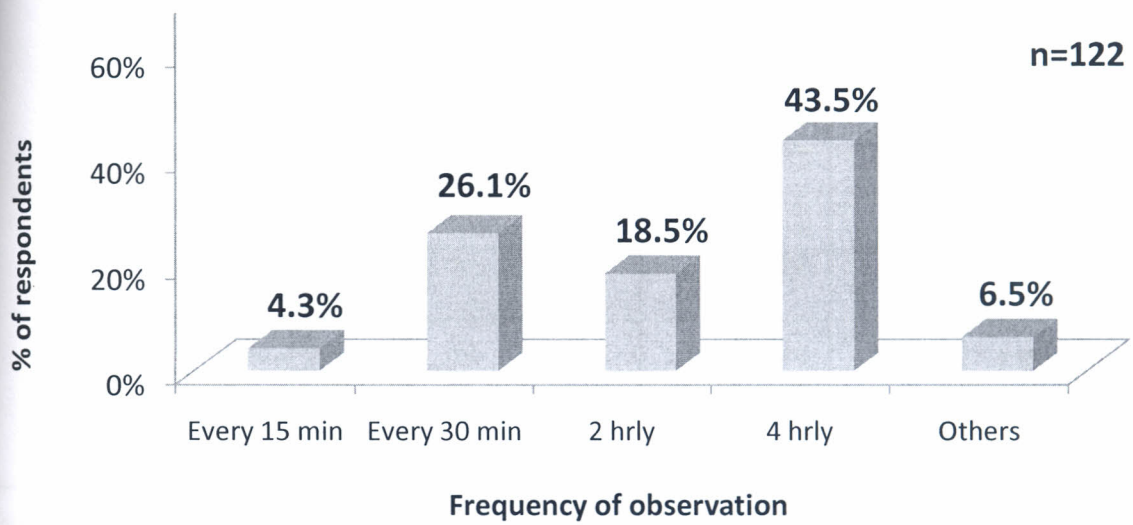


Figure 10: Frequency of observations for acutely ill patients

Nurse - Patient Ratio * Frequency of monitoring Cross tabulation

			Frequency of monitoring					
			Every 15 min	Every 30 min	2 hrly	4 hrly	Others	**Total**
Nurse - Patient Ratio	1:7	Count	0	4	0	4	1	9
		% of Total	.0%	3.3%	.0%	3.3%	1.1%	7.7%
	1:20	Count	4	13	16	25	5	64
		% of Total	3.3%	11.0%	13.2%	20.9%	4.4%	52.7%
	1:30	Count	1	8	3	20	1	34
		% of Total	1.1%	6.6%	2.2%	16.5%	1.1%	27.5%
	1:40	Count	0	7	3	3	0	12
		% of Total	.0%	5.5%	2.2%	2.2%	.0%	9.9%
	Other	Count	0	0	1	1	0	2
		% of Total	.0%	.0%	1.1%	1.1%	.0%	2.2%
Total		**Count**	5	32	23	54	8	**121**
		% of Total	**4.4%**	**26.4%**	**18.7%**	**44.0%**	**6.6%**	**100.0%**

Type of investigation routinely carried out to acutely ill patients

The common laboratory test being carried out by respondents were urea, electrolyte and creatinine test (30.8%), followed by full haemogram examination (23.4%) and blood gas analysis. Blood sugar test were reportedly carried out routinely by about 15%. Other tests such as CT scans, ECG and urinalysis were routinely done by less than 2% of respondents.

Table 5: Type of investigations carried out to acutely ill patients

Investigation	Frequency	Percentage
Blood Gas Analysis	50	23.4%
Blood Sugar	31	14.5%
FHG	50	23.4%
HIV	3	1.4%
INR	3	1.4%
LFT	6	2.8%
UEC	66	30.8%
Urinalysis	3	1.4%
ECG	1	0.5%
CT Scan	1	0.5%
TOTAL responses	**214**	**100.0%**

Respondents conversant with cardiopulmonary resuscitation procedure

66.7% of respondents reported being conversant with the cardiopulmonary resuscitation procedure. 32.2% of respondents were not conversant with the process while 1.1% did not respond to the question.

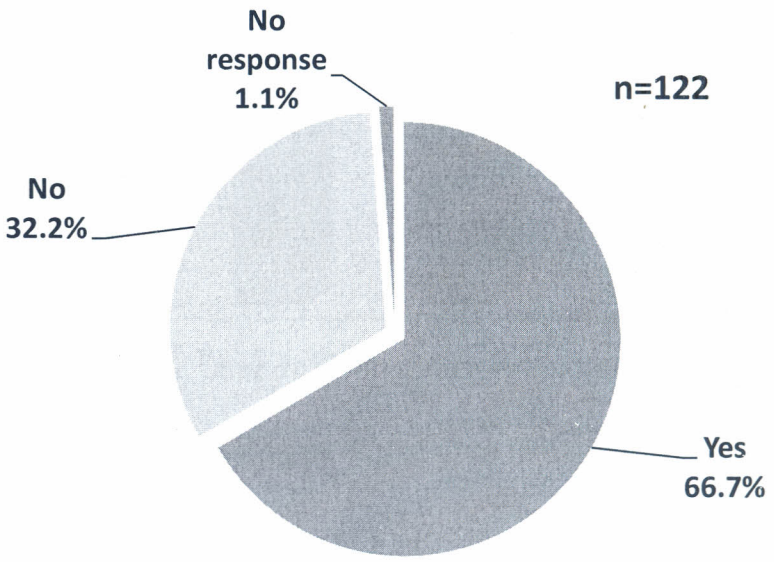


Figure 11: Proportion of respondents who are conversant with CPR

Table 6: Correlation between the duration respondents have worked in Kenyatta National Hospital

		Duration worked in KNH	Conversant with CPR
Duration worked in KNH	Pearson Correlation	1	0.198
	Sig. (2-tailed)		0.063
	N	122	119
Conversant with CPR	Pearson Correlation	0.198	1
	Sig. (2-tailed)	.063	
	N	119	119

The mean duration respondents have worked in KNH was 10.3 years. However, it was found that there was no significant correlation between the duration respondents have worked in the hospital and their knowledge on cardiopulmonary resuscitation (P=0.198, p=0.063)

Rating of acute care in respondents ward

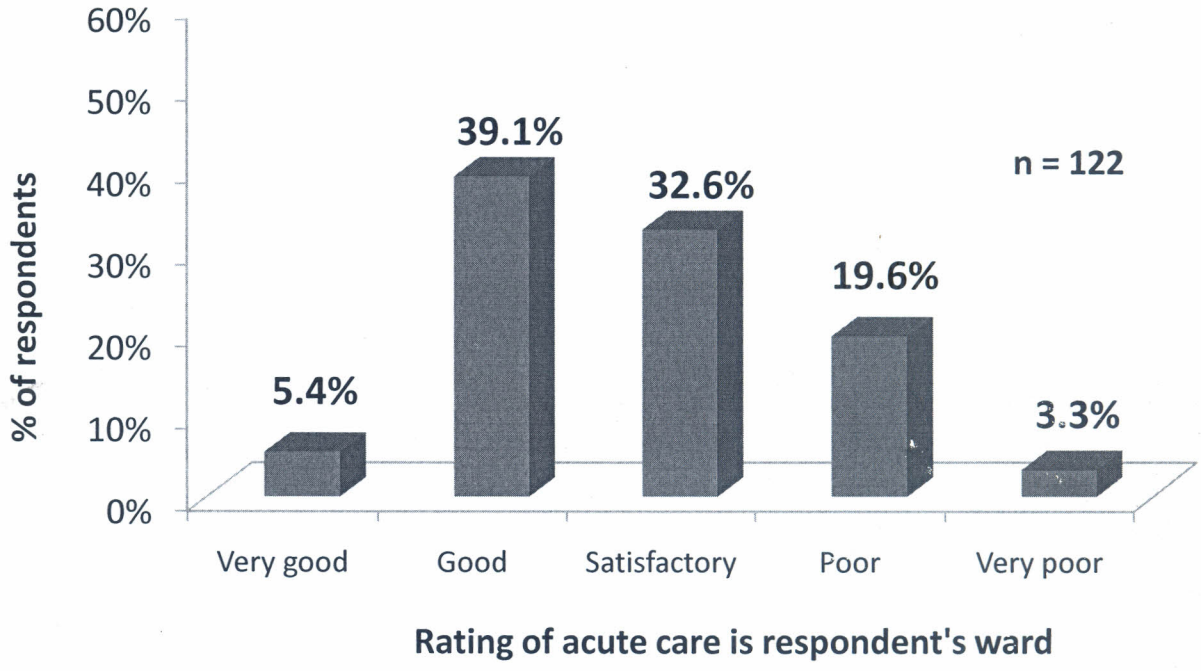


Figure 12: Bar chart illustrating the rating of acute care in respondents' wards

When respondents were asked to rate the care offered to acutely ill patients in their own wards, only 5.4% rated the care as very good. 39% rated the care as good and 32.6% rated it as satisfactory. More than 20% of respondents rated the care as poor or very poor.

Policies Guiding Acute Care Nursing

Table 7: Table showing the proportion of respondents whose wards have written policies/guidelines

Presence of Policies in ward	Frequency	Percent
Yes	24	19.6%
No	97	79.3%
Not indicated	1	1.1%
Total	**122**	**100.0**

A large proportion (79.3%) of respondents did not have policies or standard operating procedure documents in their wards. However on cross tabulation, a chi square test indicated that there was no statistical difference on the care given to the acutely ill patients among the respondents who had policy guidelines in their wards and those who had none (x^2=0.109, p=0.741).

Table 8: Cross tabulation of the presence of policies on acute care versus involvement in acute care

			Involvement in acute care		
			Yes	No	Total
Presence of Policies	Yes	Count	21	3	24
		% of Total	18.0%	2.2%	20.2%
	No	Count	82	13	96
		% of Total	68.5%	11.2%	79.8%
Total		Count	103	16	120
		% of Total	86.5%	13.5%	100.0%

Table 9: Chi-square test for relationship between presence of policies and involvement in acute care

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.109[a]	1	.741	
N of Valid Cases	122			.546

When the relationship between the presence of policies and involvement in acute care by respondents was examined, there was no significant association between the two variables (X^2=0.109, p= 0.546)

Attitude on Knowledge of Acute Care

When nurses were asked to rate their knowledge on assessment and management of acutely ill patients, a large proportion (88%) of respondents agreed or strongly agreed that they had adequate knowledge. Only 12% of respondents either disagreed or strongly disagreed with the statement.

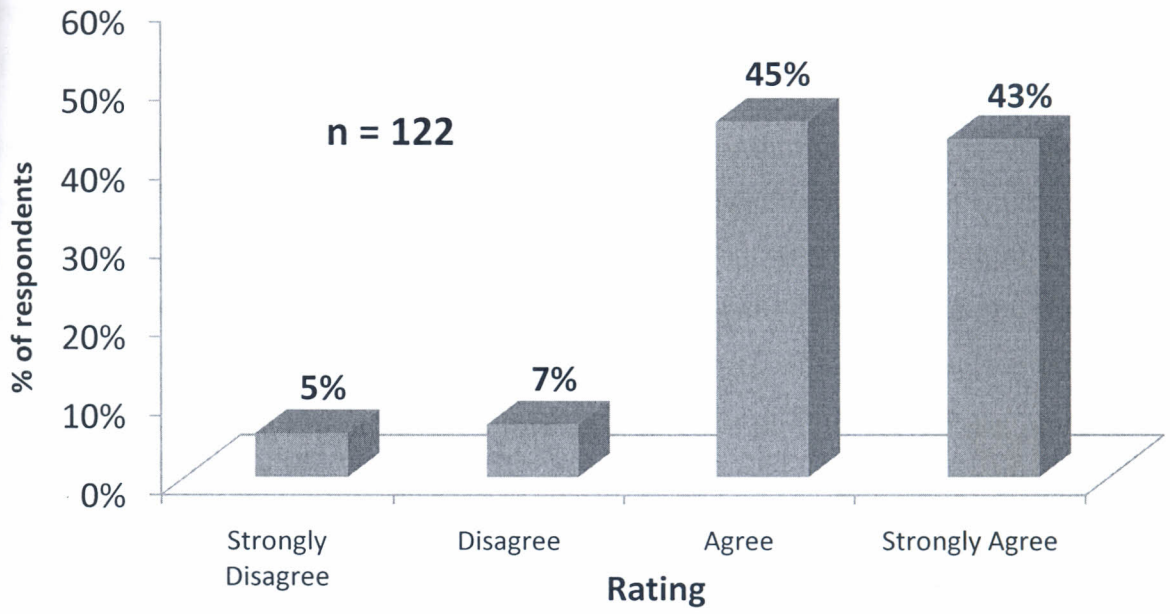


Figure 13: Rating of the respondent's knowledge on management of acutely ill patients

Nurses were able to correctly identify some of the major signs and symptoms used to classify an acutely ill patient. The various classification of who an acutely ill patient as reported by the respondents included; an unconscious patient, a patient in respiratory distress, a newly transferred patient from the critical care unit a patient with a medical / surgical emergencies e.g., Diabetic keto-acidosis, status asthmaticus, acute appendicitis among others. The classifications are in line with the standard classifications and characteristics used in defining an acutely ill patient by Lewis et.al, 2007.

However, a significant proportion of respondents (89%) still felt that they needed more training in some of the critical care courses like BLS (31%), ACLS (16%), critical care nursing (22%) so as to enable them be effective in providing care to the acutely ill patients. A study done by Wright (2000) also concurred and supported this by suggesting that ward staff needed to acquire new knowledge and skills to meet the demands of a rapidly changing patient profile. However, recent other studies have also indicated that ward – based clinical staff are not receiving the education and support required to meet this demand.

Nurses' Practice in relation to the management of the acutely ill patients

Staff caring for patients in hospital settings should have competencies in monitoring, measurement, interpretation and prompt response to the acutely ill patients appropriate to the level of care they are providing.

Practice in relation to acute care by respondents was assessed through their reported involvement in actual provision of care to the acutely ill adult patients in the ward. A majority of respondents (38%) reported observing their patients twice a day and a 23% reports observing their patients only once a day. Based on this pattern of observations, identification of patients that are on the path to deterioration would be difficult and this can have severe consequences for patients in relation to increased morbidity, mortality and requirements for ICU care.

Early identification of clinical deterioration is therefore an important aspect of care and helps prevent subsequent cardiopulmonary arrest and to reduce mortalities of acutely ill patients in the general wards. It has been noted that many patients show signs of physiological

deterioration before admission to ICU, before cardiac arrest and even before death. Thus timely and appropriate detection by medical and nursing staff of physiological deterioration benefits the patient.

Despite a number of nurses rating themselves higher on the management of an acutely ill patient, it is questionable as their findings on practice did not relate to their being knowledgeable. From the FGD session some respondents reported that CPR was rarely carried out in their wards and if at all one is performed it could be once a month or not at all. When questioned on what happens when a patient goes into cardiac arrest, one respondent reported "*most patients are given oxygen but no cardiac massage is ever done*".

According to the NICE guidelines (2007), as a minimum, the following physiological observations should be recorded at the initial assessment and as part of routine monitoring at least every thirty minutes or depending on the institutional protocols; - Heart rate, respiratory rate, systolic blood pressure, level of consciousness, oxygen saturation and temperature.

In specific clinical circumstances during physiological deterioration requires that additional monitoring should be undertaken, for example:-Blood gas analysis (BGA), hourly urine output, biochemical analysis, such as lactate, blood glucose, base deficit, arterial PH and pain assessment depending on the patient's diagnosis.

In this study, the observations routinely carried out on acutely ill adult patients as identified by respondents included; blood pressure (23.4%), heart rate(20.1%), temperature(19.8%), and respiratory rate (18.8%). Other critical parameters to be monitored such as oxygen saturations (SPO2), Glasgow coma scale (GCS) and urine output monitoring were only carried out by a small percentage of nurses at 4%, 6%, and 3% respectively. This being the case it can therefore impact negatively on the safety of the patients during acute illness as some of the signs can go unseen.

Further, respondents were also interviewed on how often they observed the already identified acutely ill patients in their wards. Of the ninety two respondents 40 (44%) reported to observing the very sick patients at least every four hours, 26% observed them every thirty minutes, another 18% and 4% reported observing the acutely ill patients every two hours and

acutely ill patient. It was found that the right staff with critical care knowledge was not always available when patients go into cardiac arrests and required resuscitation. Factors reported by respondents to be hindering identification of acutely ill patients were established. These were grouped into five categories as follows; staff related, patient related, equipment, knowledge issues and practiced based factors.

Staff related factors (52%) were reported to be the most challenging factor that influenced management of acutely ill patients in the general wards. Generally, Staff reported that there was a problem in the hospital in terms of staffing so that a major proportion of nurses (93) reported a nurse: patient of 1:20 or more. Nursing council of Kenya stipulates the recommended nurse patient ratio as 1:7. The nurse: Patient ratios in KNH are way above this.

Patient related factors were challenges reported by nurses to also influence the care offered to them. This was in terms of the patient's already prevailing condition in regards to the severity of the condition on admission to the ward especially the referred patients. Respondents reported that clients from ICU were transferred prematurely to the wards while still in critical condition and this compromised care.

Lack of enough and appropriate equipments, was reported also a challenge in the care of the acutely ill client. Respondents reported that sometimes they are not in working condition or completely not available for them to use.

The other factors reported were delay by the emergency team to act during an emergency. However respondents reported having no emergency teams in the institution though in most cases it was a doctor on call who was called upon to review the patient and make decision on further management or incase of transfer to ICU depending on the availability of space, the doctors are the ones who make the decisions. Other challenges reported by the respondents were knowledge related issues. Respondents felt they had inadequate critical care knowledge required to manage the acutely ill patients. 20% of respondents reported poor practice on skills like care of tracheostomy, suctioning procedures and care of the invasive lines like central lines which thus compromises care for the patients.

Emergency response team consists of a team of health personnel, the nurses and doctors who come in to assist in resuscitation of patients. This team plays a very important role in the management of acutely ill patient in a health care institution.

Nurses attitudes towards management of acute care

A large proportion of respondents rated themselves highly on knowledge on the management of the acutely ill patient (88%). However, their practice on management of the acutely ill did not correspond to their reported high knowledge levels. It is possible that other factors such as lack of equipments, staff shortage, and patient overflow could be a contributing factor.

Lack of policy guidelines and the fact that they could also be available but under lock and key or not accessible to them was one of the factors that the respondents felt they were being denied knowledge that is already present. These contributed a lot in terms of their performance. One of the respondents said, *"Care given to these patients is not satisfactory, nurses can do better if at all there are equipment and enough staff. I think we try our best to offer the much we can..."* Respondents also felt that if Emergency response teams were present, they could feel a difference in care as they could respond on time and assist inspite of the other shortcomings like understaffing in the wards.

REFERENCES

Allen, K. (2004) Recognizing and managing adult patients who are critically sick. Nursing times; 100 34, 34-37.

American Association of critical care nurses (2000), Education Standards for critical care nursing. C. V Mosby – Toronto.

Bradley, E.H., Cherlin, E., McCorle, R., et al. (2001) Nurses use of palliative care practices in the acute care setting. Journal of Professional Nursing, 17(1), 14-22.

Benner, P (2006) From Novice to Expert: Excellence and Power in Clinical nursing Practice. Menlo Park: Addison- Wesley.

Chaboyer, W, Foster MM, Foster M, Kendall E. (2004). The intensive care unit liaison nurse towards a clear role description. Intensive and critical care nurse; 25:16-28.

Chaboyer W, James H, Kendall E. (2005) Transitional care after ICU: current trends and future direction, critical care Nurse; 25: 16 – 28.

Daily Nation 14th December 2007 pg. 2.

Department of health (2001) the nursing contribution to the provision of comprehensive critical care for adults: A strategic critical care for adults: A strategic program for action London: the stationary office.

Department of Health (1996) Clinical Guidelines, Using clinical guidelines to improve Patient Care with NHS; London.

Department of Health, modernization agency (2003) critical care outreach 2003: progress in developing services.

Dyer, I (1995) Preventing the ICU syndrome. Intensive and critical care nursing II:

East African Standard, 7th July and 23rd July 2007.

Gibson J. M (1997) Focus of Nursing in Critical and Acute Care Settings: Preventing or Cure? Intensive and Critical Care Nursing 13:3, 163-166.

Goldholl, D.R., While S.A; Summer, A. (1999) Physiological values and procedures in the 24 hours before the admission. Anesthesia 54:529-534.

Gupta S.D (2005), Nursing Interventions for the critically ill. Jaypee Brothers Medical Publishers (p) Ltd. New Delhi – India.

Jaya Kuruvilla (2007) Essentials of Critical Care Nursing, Jaypee Brothers, Medical publishers (P) LTD; New Delhi.

Lewis et.al (2007) Medical Surgical Nursing, *Assessment and Management of Clinical Problems,* 7th edition; Mosby Elsevier- Singapore.

Haines, S., Load, S. (2001) Supporting ward staff in acute care areas: expanding the service intensive and critical care nursing 17:105-109.

http://www.dh.gov.uk/en/publicationstatistis/publication/publicating policy and guidance/DH - 40.

Kanse, J. et al (2004) A comparison of ante adults to cardiac arrest, deaths and emergency intensive care admissions in Australia and new Zealand and the United Kingdom the Academic study Resuscitation: 62:275-282

Marriner Tomey (2003) Guide to Nursing Management and Leadership 8th edition. Mosby, St. Louis Montana.

McCaughan et al (2002), Acute care Nurses Perceptions of Barriers to using research information in clinical decision making 39 (1) : 46 – 60.

MC Gloin, H.; Singer, M. (1999) Unexpected deaths and referrals to intensive care patients in general wards. Are some cases potentially avoidable? Journal of the Royal College Physicians 33:3, 255-259.

MC Quillan, P. et al (1998) confidential Enquiry into quality of care before admission to intensive care. British medical journal; 316: 1853-1858.

National Confidential enquiring into patient outcome and death (2005) an acute problem? A report of the national confidential enquiry into patient outcome and death (NCEPOS) London NCEPOD.

National Patient safety Agency (2007) Recognizing and Responding Appropriately to early signs of deterioration in hospitalized patients

http://www.npsa.nhs.uk/caprate/news/deteriorate - in hospital - patients.

NICE (2007) Acutely ill patients in Hospital: Recognition of and Response to acute illness in adults in Hospital. http;//www.nice.org.uk/guidance/index.

Polit & Hungler (1999); Research methods: Application and Practice; 4th Edition; CV Mosby; St Louis USA.

Smiths, A., Wood, J. (1998) can some in hospital cardiopulmonary arrests the prevented. Resuscitation 37:3, 133-137.

Turnock, C (1997) ICU syndrome: a discussion of the effects of intensive care on critically ill patients. British journal of intensive care 7:4, 144-147.

Watson, D (2006) The impact of accurate patient assessment on the quality of care nursing times; 102"6, 34-37.

APPENDIX I: CONSENT FORM

TITLE OF STUDY: Nursing management of the acutely ill adult patient in the general wards at Kenyatta National Hospital.

My name is Valerie Suge, a postgraduate student at the School of Nursing Sciences, University of Nairobi. I would like you to participate in a research study. The aim of this study is to establish the "knowledge, attitude and practice of nurses in the management of acutely ill patients in the general wards of KNH". Before you participate it is very important that you understand the following principles that apply to all participants in the study.

Participation through the filling in of a questionnaire is entirely voluntary. There is no Penalty for declining to participate. There are no risks involved. Your confidentiality will be safeguarded: your identity and records relating to your participation will remain confidential. You are not required to write your name or any other identification on the questionnaire. You are free to withdraw from the study at any stage without fear of victimization. No names of any participant will appear in the final reports or publications resulting from this study. Giving honest information will help us arrive at correct conclusions and help in accurate interpretation of the research findings.

In case of any problem or concern, you may either contact my supervisors in the School of Nursing Services or me on the following number: 0722587768 or the KNH Ethics and Research Committee at P.O. Box 20723, Tel. 726300-9, Nairobi, Kenya.

RESPONDENT

I have fully understood the objectives of the research and hereby sign as a show of willingness to voluntarily participate in this study the nature of which has been sufficiently explained to me.

Signature_____ Date

_____

Investigators signature_____ Date_____

APPENDIX 11: THE QUESTIONNAIRE

Questionnaire no: _____ Research assistants' initials_____

INSTRUCTIONS:
Please answer all the following questions. Write in the spaces provided or tick the appropriate option in the box provided. DO NOT indicate your name or any information that can identify you as an individual. This information is confidential and will be used for data analysis purposes only).
Answer all the questions.

	SECTION I: BACK GROUND INFORMATION SECTION
	Date _____ Ward _____
1.	Indicate your gender 1. Male 2. Female
2.	What is your year of birth? _____ year of birth **OR** _____ age
3.	What is the highest level of education you have achieved? 1. Masters degree 2. Bachelor's degree 3. Diploma 4. Certificate 5. Other(specify_____
4.	What's your current designation? 1. ACN 4. NOII 2. SNO 5. NOIII 3. NOI 6. ECN
5.	How long have you worked in Kenyatta National Hospital? _____ (years)
6.	How long have you worked in this ward? _____ (years)
7.	What is your current primary responsibility? (*tick only one)* 1. Administrator 2. Education 3. Patient care provider / Clinical Nurse 4. Other (please specify) _____
8.	What is the designated bed capacity for this ward? 1. _____ beds 2. Don't know
9.	Which nursing modality do you practice in this unit? 1. Primary Nursing 2. Team Nursing 3. Functional Nursing 4. A mixture of primary and team nursing 5. A mixture of primary and functional nursing 6. Other (Please specify) _____
10	What is the common Nurse – patient Ratio in this ward? 1. 1:7 2. 1:20 3. 1:30

4. 1:40
5. Other (Please specify) ----------

Have you attended any training on critical care?

1. Yes [ ] 2. No [ ]

If yes, please indicate any of the training courses that you have attended (Attach an additional list if necessary);

Title of the course/ workshop/ CME/ seminar attended	Duration of training	Month and Year of attendance

SECTION II

Who do you classify as an acutely ill/ critically ill patient?

How did you identify that this was an acutely ill /critically ill patient?
List at least three main parameters you considered.

1. _____
2. _____
3. _____

In the last 3 months, have you been involved in the management of an acutely ill patient or a physiologically deteriorating patient?

1. Yes [ ] 2. No [ ]

Which observations and /or laboratory tests do you routinely carry out on acutely ill/ critically ill patients in your ward?

Observations **Laboratory Tests**

a). _____ _____
b). _____ _____
c). _____ _____
d). _____ _____

How often do you monitor patients admitted to this ward? Please indicate the timings.

Frequency **Time**

1. Once daily ----------
2. Twice a day ----------
3. Three times a day ----------
4. Four times a day ----------
5. Others (please specify) ----------

How often do you monitor critically ill patients in this ward?

1. Every 15 minutes
2. Every 30 minutes
3. 2 hourly

1. _____
2. _____
3. _____

In your opinion, what are some of the factors that may hinder identification and management of an acutely ill patient in a general ward? *(Tick your acceptable choices only).*

1. Inadequate staffing [ ]
2. Lack of knowledge of basic life support skills [ ]
3. Patient prevailing condition [ ]
4. Unfavourable environment [ ]
5. Lack of equipments and resources [ ]
6. Staff cultural and religious beliefs [ ]
7. Other (specify)_____ _____

Are there any written policies or procedures on the management of emergencies available for your use in the wards?

1. Yes [ ] 2. No [ ]

If yes please specify in which areas/topics, and whether they are being used.

_____
_____

Does the hospital have an emergency response team OR Cardiac arrest team?

1. Yes [ ] 2. No [ ]

If yes, has the hospitals' emergency response team or cardiac arrest team ever assisted you in the management of clients in the ward?

1. Yes [ ] 2. No [ ]

In your opinion, do you need any training to help you in identifying acute patients and acute management of deteriorating patients?

1. Yes [ ] 2. No [ ]

If yes, please indicate in which area,

_____
_____

SECTION III:

Nurses knowledge, attitudes and practice on the management of an acutely all patient. *(tick as appropriate)*

	Strongly agree	Agree	Disagree	Strongly disagree
All nurses should be able to identify a client who is acutely all or one who is acutely deteriorating				
I have knowledge and confidence in assessment and management of an acutely ill patient				
Basic life support skills, ACLS or ATLS are required by all nurses in continuous development care of the acutely ill patient				
The large patient number has seriously affected staff ability to promote and provide quality care to an acutely ill patient				
Inadequate staffing directly affect the quality of care provided to acutely ill patients in the wards				

APPENDIX III: FOCUSED GROUP DISCUSSION GUIDE

Introduction

In this session we will be talking about nursing management of an acute patient in general. We will be exploring your knowledge, use and attitudes towards care of an acute patient and other issues related to critical care nursing. Feel free to share your feelings on this topic.. Note that you are free to stop participation in the discussion at any time.

What will be discussed in this session will be confidential and at no time will this information be used against you. Occasionally notes may be taken for purposes of transcribing the information.

Feel free to ask questions at any stage during the discussion.

Question guide

THEME	GUIDE QUESTIONS
Knowledge	- Who is an acutely ill patient - What are some of the medical or surgical emergencies encountered in your ward - How do you identify patients whose clinical condition is deteriorating - Parameters used in
Practice	- Management of an acutely ill patient - How often do you observe your patients - How often do you observe a physiologically deteriorating patient on identification - What are the interventions done on an identified client - Interventions on general wards following a transfer of patient from critical care unit - Timings of transfer of patient to general wards from critical care - How often do they resuscitate a patient in the ward
Attitude	- Perception of an acutely ill patient - Who is to take care of the patient - Is the care given satisfactory - What do they think about the BLS and ACLS courses.

APPENDIX III: FOCUSED GROUP DISCUSSION GUIDE

Introduction

In this session we will be talking about nursing management of an acute patient in general. We will be exploring your knowledge, use and attitudes towards care of an acute patient and other issues related to critical care nursing. Feel free to share your feelings on this topic.. Note that you are free to stop participation in the discussion at any time.

What will be discussed in this session will be confidential and at no time will this information be used against you. Occasionally notes may be taken for purposes of transcribing the information.

Feel free to ask questions at any stage during the discussion.

Question guide

THEME	GUIDE QUESTIONS
Knowledge	• **Who is an acutely ill patient** *One who needs mechanical ventilation , A patient who is gasping, Patient in coma, a patient who requires oxygen , patient on total nursing care* • **What are some of the medical or surgical emergencies encountered in your ward** *Status asthmaticus, acute appendicitis, patients with acute abdomen* • **How do you identify patients whose clinical condition is deteriorating** *Doing vital sights, physical assessment, when another patient calls that the patient needs assistance, patients complaining Temperature, Blood pressure, head injury chart, low and unreadable blood sugar, multiple burns/injuries*
Practice	• **Management of an acutely ill patient** *Depends with the condition of the patient* *Administers oxygen* *Put up IV fluids normal saline/Hartman's solution* *Call the doctor on call*

	• **How often do you observe your patients** *Twice a day, once a day and three times a day* • **How often do you observe a physiologically deteriorating patient on identification** *Every 30 minutes depending on the workload , every two hours, depending on the staffing in that shift, depending on the patient's condition* • **What are the interventions done on an identified client** *From ICU → Commence on oxygen, depends with instructions through the ICU nurses, though they sometimes don't hand over everything pertaining the care of the patient* • **Interventions on general wards following a transfer of patient from critical care unit** *Suction* • **Timings of transfer of patient to general wards from critical care** *Patients are transferred considering the availability of a bed, they are often brought during the day* *Even in the evenings at the end of the shift* *Most commonly at 11am and 3pm* • **How often do they resuscitate a patient in the ward** *It is rarely carried out , may be done once a month, most patients are given oxygen but no cardiac massage is ever done* *I have never seen anybody resuscitating a patient apart from administering oxygen*
Attitude	• **Perception of an acutely ill patient** *These are sick patients who should be nursed in ICU or acute room in casualty.* *We need to be trained on ICU care so that we can give quality care to these patients* • **Who is to take care of the patient** *The nurse allocated the shift , the trained nurse, any nurse since the patient is in your ward.*

	• **Is the care given satisfactory** *Care not given satisfactorily, nurses can do better if at all there are equipment and enough staff, I think we try our best to offer the much we can* • **What do they think about the BLS and ACLS courses?** *These are courses that are mandatory to all nurses but only ICU/A&E nurses and theatre nurses are the only privileged ones.* *I think nurses are trained on these two courses might improve* *It should be offered to medical surgical nurses as ICU and medical/surgical is one its only the acuity of the patient and how critical is the condition* *No CMEs are conducted in this ward for the last 2 years. How can you even say BLS let alone ACLS.*

KENYATTA NATIONAL HOSPITAL
Hospital Rd. along, Ngong Rd.
P.O. Box 20723, Nairobi.
Tel: 726300-9
Fax: 725272
Telegrams: MEDSUP", Nairobi.
Email: KNHplan@Ken.Healthnet.org

Ref: KNH-ERC/ A/470

3rd May 2010

Valerie Jepchirchir Suge
School of Nursing Sciences
College of Health Sciences
University of Nairobi

Dear Valerie

RESEARCH PROPOSAL: "NURSES' KNOWLEDGE, ATTITUDE AND PRACTICE IN THE MANAGEMENT OF ACUTELY ILL ADULT PATIENTS IN THE GENERAL WARDS AT KENYATTA N. HOSPITAL" (P77/03/2010)

This is to inform you that the KNH/UON-Ethics & Research Committee has reviewed and **approved** your above revised research proposal for the period 3rd May, 2010 to 2nd May, 2011.

You will be required to request for a renewal of the approval if you intend to continue with the study beyond the deadline given. Clearance for export of biological specimens must also be obtained from KNH/UON-Ethics & Research Committee for each batch.

On behalf of the Committee, I wish you a fruitful research and look forward to receiving a summary of the research findings upon completion of the study.

This information will form part of the data base that will be consulted in future when processing related research study so as to minimize chances of study duplication.

Yours sincerely

PROF A N GUANTAI
SECRETARY, KNH/UON-ERC

c.c. Prof. K. M. Bhatt, Chairperson, KNH/UON-ERC
The Deputy Director CS, KNH
The Director, School of Nursing Sciences, UON
The HOD, Records, KNH
Supervisors: Mr. Antony Ayieko, School of Nursing Sciences, UON
Mrs. Rysper E. Rajula, School of Nursing Sciences, UON

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: NCST/RR1/12/1/MAS/124/3

Date: 16th June 2010

Ms. Valerie Jepchirchir Suge
University of Nairobi
P. O. Box 30197
NAIROBI

Dear Madam,

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Nurses knowledge, attitude and practice in the management of acutely ill adult patients in the general wards at Kenyatta National Hospital"*** I am pleased to inform you that you have been authorized to undertake research in **Nairobi Province** for a period ending ***31st December 2010.***

You are advised to report the **Director, Kenyatta National Hospital** before embarking on the research project.

On completion of the research, you are expected to submit two copies of the research report/thesis to our office.

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:
The Director
Kenyatta National Hospital
NAIROBI

VALERIE J. SUGE

P. O. BOX 19901 – 00202

NAIROBI

21/05/2010

THE DIRECTOR,

KNH

P.O.BOX 20723 - 00202

NAIROBI

ATT: DEPUTY DIRECTOR INCHARGE OF CLINICAL SERVIES

16/6/2010
Approved

DEPUTY DIRECTOR (CS)
KENYATTA NATIONAL HOSPITAL

Dear Sir/Madam

REF: APPLICATION TO CONDUCT AN ACADEMMIC STUDY IN KENYATTA NATIONAL HOSPITAL

I am a student at the university of Nairobi taking a Masters in science Nursing – Critical Care Nursing, and would like to conduct a study on "Nurses Knowledge, attitude, and Practice in the Management of Acutely Ill Adult Patients, in the General Wards at Kenyatta National Hospital."

The findings of the study will be useful in the formulation of policies, protocols, and procedures on the care of an acutely ill patient outside critical care setting, in terms of factors to consider in identification, and immediate actions to take.

The study will also be used to identify relevant factors that influence nurse's knowledge, attitude and practice on management of these patients in the general wards.

Your kind consideration to this matter will be highly appreciated.

Thank you,

Yours sincerely,

Valerie J, Suge.