

UNIVERSITY OF NAIROBI
COLLEGE OF HEALTH SCIENCES
SCHOOL OF NURSING SCIENCES

FACTORS HINDERING PAEDIATRIC WARD NURSES FROM USING
NURSING CARE PLANS AT KENYATTA NATIONAL HOSPITAL

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE IN
NURSING

BY
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DEDICATION

With respect and gratitude I dedicate this work to three individuals.

To you Dad

To you Mariah

To you Dr Peter I Muhandale

For constantly motivating me.

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LIST OF ABBREVIATIONS

ICU	Intensive Care Unit
IT	Information technology
JACHO	Joint commission of International Accreditation
KNH	Kenyatta National Hospital
NBU	New Born Unit
NCP	Nursing Council of Pakistan
PFC	Paediatric Filter Clinic
POPC	Paediatric Outpatient Clinic
SPSS /PC	Statistical Package for Social Scientists/Personal calculator
UK	United Kingdom
USA	United States of America
NURSING CARDEX	Nursing Care Index

OPERATIONAL DEFINITIONS

1. A Nursing Care Plan

A document developed in cooperation with the patient and /or family outlining the individual needs of the patient and the approach of health care workers in meeting them. It identifies who will give care and, directs and guides the activities surrounding the patient's care. Further, it ensures continuity and consistency of care and non-duplication of services .³

2. The Nursing Administration

A part of health care management that is concerned with the installation and carrying out of the nursing procedures, aims and policies by which it is laid down and communicated and the process of activities regulated and checked against plans. ³

3. Nursing Care Activities

All activities such as giving medications, taking vital observations and carrying out physician orders all of which surround patient care needs and care environment that a nurse engages in while providing or facilitating care .¹³

4. Paediatric Nurse

A nurse who working in the paediatric unit who may have or not undergone a training in paediatric nursing but has a minimum basic training in general nursing required of him to practice nursing .¹⁹

5. Nursing Diagnosis

Is a clinical judgment about an individual, family, or community responses to actual or potential health problems/life process .¹⁹

6. Paediatric Ward

It is a part of the hospital that is designated for and hosts paediatric patients .¹⁹

7. Nurse In-Charge

A nurse whose authority and responsibility is to oversee the patient's care activities in the ward and is answerable to senior nursing administration for patient care .¹⁹

8. Documenting Nursing Care

This is the act of writing down the nursing care provided in a designated tool for that purpose e.g. nursing care plan .¹⁹

9. Nursing Process

A systematic problem solving process by which nurses plan and provide care for patients. This involves identifying both actual and potential problems and to plan, deliver, and evaluate nursing care in an orderly, scientific manner .¹⁹

10. Individualized Patient Care

The care in which a patient/client is recognized as unique and the nursing care is tailored to meet own experiences .²⁷

ABSTRACT

Factors Hindering Paediatric Ward Nurses from Using Nursing Care Plans at Kenyatta National Hospital (KNH)

BACKGROUND: Documentation is an essential and integral part of quality nursing care. A nursing care plan best suits this purpose because it combines holistic and scientific approach to patient care. Further, it communicates and supports continuity of care though minimally used by nurses.

OBJECTIVE: The aim was to identify factors hindering paediatric nurses from using nursing care plans.

METHOD: This cross-sectional descriptive study was conducted from June to August 2007 at KNH. It used a random sample of 7 in-charge and 100 non in-charge nurses who filled a self-administered close-ended questionnaire. Pearson product-moment correlation was used to assess the association between variables with a P value set at 0.05.

RESULTS: Only 2% nurses were utilizing care plans. The characteristics of the nurse (i.e. age: $r = .026$, $p = .796$; qualification: $r = .007$, $p = .941$ and years of service: $r = .135$, $p = .181$), nursing work (i.e. workload: $r = .099$, $p = .328$ and stress: $r = -.027$, $p = .786$) and nursing administration (i.e. staffing : $r = .192$, $p = .680$ and care plan policy: $r = .277$, $p = .547$) had a non significant linear relationship with utilizing care plans. The linear relationship between familiarity with the care plan content ($r = .198$, $p = .049$) and its use was statistically significant whereas ease to update a care plan ($r = .013$, $p = .897$) was not.

CONCLUSION: Further research is indicated to determine hospital-specific factors predicting non-use of care plans in order to address them with aim of popularizing their use. This will go a long way to enrich the four main areas of nursing: Research, Education, Administration and Teaching.

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND INFORMATION

Documenting nursing care provided to patients is an essential component of the nursing profession and it is achieved through a number of documentation tools. A nursing care plan has been singled out as the most significant tool amongst the tools used by the nursing staff for documenting and communicating nursing care. ^{1,2}

Current nursing practice hinges on the individuality of each patient (each patient is different); thus need to personalize care through use of care plans. ³ Furthermore, the current challenge for many healthcare institutions is to help the professional nursing staffs refine their understanding of nursing diagnoses and charting skills, to identify nursing problems in need of care and propose appropriate care plans. ⁴

A care plan demonstrates individualized patient care, that is, care based upon changing and revised patient needs and coping abilities reflected in diagnoses, goals and interventions in the physical, psychological and social/cultural areas of functioning. ⁵ In its standards, the Joint commission of International Accreditation recommends systematic assessment of patient care needs and writing of a care plan within 8 hours for each new patient admission. ^{6,9}

Studies on the utility of nursing care plans have revealed that care plans have the following advantages.³ First, Care plans help nurses set priorities thus allowing them to assist their patients cope with the most essential nursing care problems. This saves time and the quality of each interaction is increased. Second, care plans help in systematic communication from one person to another on the same shift, from personnel of one shift to another, from one ward or service to another, from one agency to another, from one admission to another, and from pre- to post treatment status as well as from agency to home.

Thirdly, planning ensures continuity of nursing care thus showing what has been done and what is to be done hence avoiding duplication of care activities. Fourth, planning of care ensures smooth flow of nursing care throughout the states of a patient's illness that result in better-coordinated care. Fifth, nursing care plans form the basis for evaluating care, serving as a guiding campus that maintains the nurse on the right track of nursing care activities rendered.

Finally, nursing care plans contributes to staff development because they are built on a sound foundation of scientific knowledge, particularly of pathophysiology, total responses to stress, and rationale of treatment. The expansion of knowledge, plus the variety of patients contacted, makes it necessary for the concerned nurse to constantly broaden her background, observation and interpretation.

1.2 STATEMENT OF THE PROBLEM

The implementation of care plans is faced by challenges within the environment in which they are used, a rationale for developing this study. Previous studies points out that nursing care plans are the most difficult part of the nursing process to implement. ^{8, 10,35}

It has been observed ¹¹ that poor documentation of nursing is linked both to extrinsic and intrinsic barriers. Extrinsic barriers includes heavy patient load, insufficient staffing and cumbersome charting formats, and intrinsic barriers consisting of inherent or internal influences on behavior that includes lack of standardized clinical nursing language, lack of motivation and poor writing skills.

Overly, the use of nursing care plans increases the efficiency and effectiveness of the nursing service that leads to quality nursing care provided to patients/clients. Indirectly, both the hospital admission days and cost of treatment are reduced. This enables the patient to return to normal daily living activities.

The fact that care plans reflects individualized care forms an important element in safe practice of health care amongst children who form a special category of patients. ¹² Likewise, this could be the basis for planning actual care of each individual child even in the community.

A study conducted in the South African Hospitals ¹³ reveals that record keeping in nursing scores 11% whereas handing over between shifts is less than 50%. In another study in Mauritius on nursing handover reports ¹⁴ reveals absence of individual care planning which is the ideal standard. No similar studies have been published in Kenya.

1.3 Major issues arising from problem statement

The main issues that were arising from the problem statement are as follows:

- a) Nursing care plans are an integral part of an effective and efficient nursing practice, which if used properly will improve the quality and quantity of nursing care provided, nurse satisfaction, reduction in the number of days of patient hospitalization and subsequently the cost of treatment.
- b) Implementation of nursing care plans continue to face challenges from within the practicing nurse or the environment in which the nurse practices. Equally, the care plan can be an obstacle to itself.

1.4 Research questions

The following research questions were addressed:

1. To what extent do paediatric ward nurses use nursing care plans?
2. Does personal factors such as age, education and length of service influence nurses' use of care plans?
3. How do nursing work characteristics such as workload and other team members influence use of nursing care plans?

4. Does the design and content of nursing care plan influence its use?
5. Does the nursing administration characteristics e.g. policies, staffing and continuing education influence nursing care plans use?

1.5 Main objective

The objective addressed was:

1. To identify factors hindering paediatric ward nurses from using care plans at Kenyatta National Hospital paediatric wards.

1.6 Specific objectives

The specific objectives addressed were:

1. To assess the extent of use of nursing care plans amongst paediatric nurses.
2. To relate personal factors such as age, education and length of service to nursing care plan utilization.
3. To determine how the nursing workload and stress in nursing work influence use of nursing care plans.
4. To determine whether the design and content of the nursing care plan has a bearing on the use of nursing care plans.
5. To assess whether the nursing administration-determined factors such as policies, staffing and continuing education have influence on use of care plans.

1.7 Hypotheses

The following hypotheses were addressed:

1. There is no relation between personal factors (such as age, education and length of service) and nursing care plan utilization.
2. The nursing work characteristics (such as workload and stress) are not related to nursing care plans utilization.
3. The nursing care plan contents and design are not related to nursing care plans utilization.
4. The nursing administration-determined factors (such as policies and staffing) have no relation with utilization of nursing care plans.

1.8 Key Variables

In this study,

A. The following variables were independent:

- i. Nursing care plan characteristics such as design and content
- ii. Nurse' characteristics such as age and education
- iii. Nursing work characteristics such as stress and work load
- iv. Nursing administration characteristics such as staffing and policies

B. The following was the dependent variable:

- i. Utilization of nursing care plans by paediatric ward nurses

C. The outcome was:

- i. Utilization or non-utilization of nursing care plans

1.9 Conceptual Framework for study variables

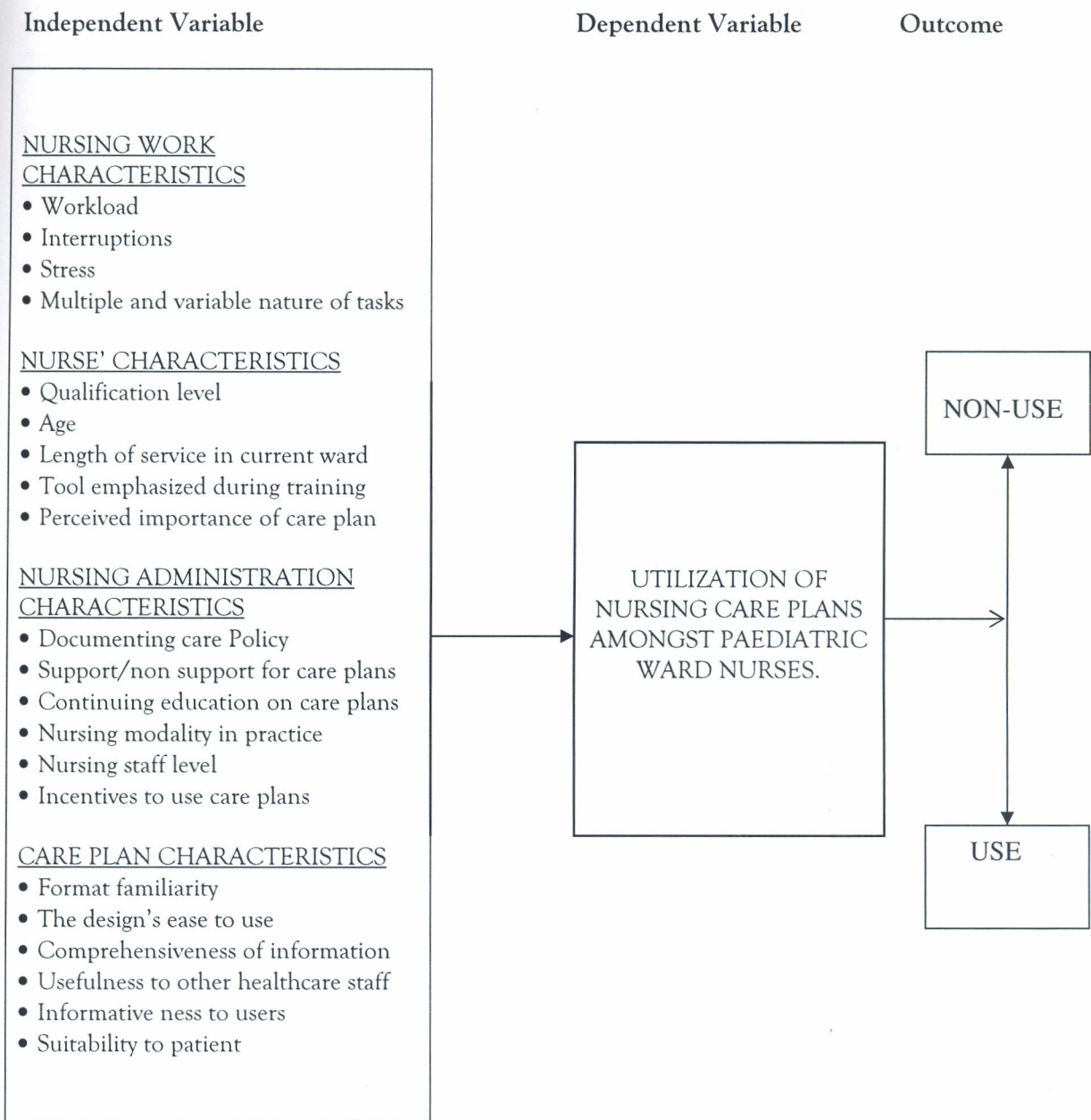


Figure 1 This framework shows the interaction between factors influencing utilization of the nursing care plan and the outcome on care plan utilization amongst paediatric ward nurses.

1.10 Study Justification

Throughout the review of literature, no studies or reports were found to have comprehensively focused on exploring factors hindering nurses from using nursing care plans. Previous studies reviewed were found to have investigated the effectiveness of the nursing care plans alone^{15,2} or in comparison to other tools for documenting nursing care.^{12,16} Barriers to documenting in the nursing care plans have not been well identified to help nurses and their leaders improve nursing documentation.¹⁷ Even so, the studies were mainly from Europe and USA with few from Africa.

A study done in South African hospitals on the quality of nursing care reveals that nursing care plans are least used.¹³ Too, findings from previous studies may have been implicitly over-generalized to all hospitals.¹⁸ This study is therefore set to identify and explain factors hindering KNH paediatric ward nurses from utilizing nursing care plans.

1.11 Purpose of the Study

The purpose of the study was to identify factors hindering use of nursing care plans amongst paediatric nurses at KNH with the aim of promoting their better use. This will make appropriate benefits be realized and improve nursing care of patients ultimately.

1.12 Expected Benefits

Findings from this study are expected to enrich the four domains of nursing that include nursing practice, nursing education, nursing administration and nursing research. Proper integration of care plans in nursing practice will enhance provision of both individualized and holistic nursing care; boost both the teaching-learning process and research in nursing; aid health care decision making amongst health care team members and the administrative staff, and ultimately improve quality of nursing care.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Documenting nursing care given to patients and clients is an essential component of nursing care. Documenting is done differently amongst nurses, health care institutions, specialties and locations. Further, the care is documented using different types of tools but the nursing fraternity has acknowledged the nursing care plan as the most effective for this purpose.

A nursing care plan is an instrument meant to facilitate clinical nursing care activities. Despite this, the care plan largely remains unused in many clinical settings. A great deal of this literature is based on studies done outside the African setting.

2.2 Theoretical Basis of Nursing Care Documentation

This paper is guided by the theory of **Ernestine Wiedenbach**, which conceptualizes clinical nursing as a helping art. The helping process is triggered by patient's behavior which elicits nurses' response /reaction that is rational, reactionary, or deliberative. The help of a nurse is defined as "measures or actions required and desired which potentially restore or extend ability to cope with situational demands". The actions should be mutually understood and agreed upon with full knowledge of implications, and they should be either patient-directed or nurse-directed or both.

Meeting needs for help implies goal-directed, deliberate, patient-centered practice actions that require: factual, speculative, and practical knowledge; judgment, and procedural and communication skills.^{19,20}

The nursing care plan, therefore, provides a suitable means for helping the patient as perceived by Wiedenberch's theory.

2.3 Purpose, Tools in use and Reality of Nursing Documentation

The core of nursing is the caring facet that is seen as hands-on nursing care and empathizing by a majority of nurses. Alongside caring are other subtle nursing activities such as care documentation that are of equal importance but they are rarely recognized.²¹

Documenting care accurately is fundamental to providing quality patient care²², and the current focus of health care systems is on chart audit to reveal indicators of quality care.⁴

Documented information on care given is an important reference and the rule of thumb is, "if the care given is not documented then it is presumed not given". Each patient's record should be complete, accurate and up-to-date because it serves four primary functions:

- a. professional way of communicating patient's/client's health information,
- b. facilitating quality assurance,
- c. facilitating education and research, and
- d. demonstrating nurse's accountability in addition to facilitating planning.^{16,12,22}

Among the most common documentation tools used in daily nursing practice include the kardex (nursing notes), end of shift oral reports, writing on scraps, nursing care plans, report cards, and charts.^{23, 24}

In real practice nurses' documentation is substandard and some of the reasons attributed to this includes use of different types and formats of documentation tools by the health care institutions, specialties, nurses and work places;²⁵ and disparities in documenting styles have been noted between the more and less experienced nurses.¹⁵

2.4 History, Structure and Benefits of Nursing Care Plans

Historically, nursing care plans were introduced in 1967 as part of the nursing process structure and as a project of nursing professionalism.⁷ A nursing care plan consists of the four phases of the nursing process as follows:

- a. assessment and identification of patient's/client's actual or potential problem (nursing diagnosis),
- b. planning the expected outcome and the nursing interventions required to achieve it (goal),
- c. putting planned nursing interventions into practice (intervention),
- d. and evaluating the actual outcome with the expected outcome, and subsequently changing the nursing care where required.^{16,26}

A nursing care plan has many benefits amongst users. The main benefits include: guiding clinical practice which involves providing individualized care, prioritizing patient care needs, communicating care, and ensuring continuity of care; guiding the teaching and learning of student nurses and practicing nurses; a tool for quality assurance, and facilitating research .^{15, 27}

2.5 Impact of Information Technology on Nursing Care Plans

Information technology (IT) has been incorporated in health care as evidenced by the introduction of electronic patient records .²⁸ Though electronic patient records may facilitate record keeping, they are a long way off in many clinical settings and they do not compensate for a mind-set that ignores the value of good patient records as an essential component of nursing.²⁹

Literature review on electronic charting suggests that electronic patient records are efficient and effective because: they save time, reduce duplication of both nursing notes and energy, and funds, all of which can be ploughed back to direct patient care.^{30,9,31} Furthermore, electronic charting discourages nurses from using imprecise terms since the nurses select only appropriate term(s) from the list of inbuilt clinical language.

Though electronic records are applauded, their shortfalls include; limited number of terminals or access points, reliance on electricity, illiteracy in IT amongst users,

unreliability of systems working away from patients, and a feeling that over reliance on computers will erode nurses' critical thinking skills.^{32, 11, 27}

In conclusion, technology is here with us and if nursing has to stay in the game it must not let the development of electronic patient records slip off its hand.²⁷

2.6 Barriers to Documenting in Nursing Care Plans

Different approaches have been used to explore challenges facing nurses in using nursing care plans. The various obstacles identified in past studies can be condensed into four principal broad categories: factors related to the individual nurse, nursing care activities, nursing administration, and nursing care plan.

2.6.1 Factors Related to the Nurse

Some individual characteristics are known to bar nurses from documenting in the nursing care plan. It has been pointed out that nurses have a tradition of documenting in the nursing Cardex and reporting orally the care given. Moreover, nurses feel less motivated to use the nursing care plans.^{25, 8} Nurses view care plans as professionalism tools and further argues that they are more paper focused than the patient. Further, lack of a distinct professional nursing language has been attributed to failure of nurses to document in care plans.^{30, 18}

Cardex

Some nurses are nursing care plan shy because of inadequate knowledge or ignorance both on the nursing care plans and formulating of the nursing diagnoses.^{33, 34, 9, 4} To some extent, devaluation of nursing care plans by both nurses themselves and other members of the health care team,³⁵ and elderly age of the nurse have been positively identified as possible reasons discouraging use of nursing care plans.³⁶

2.6.2 Factors Related to the Nursing Care activities

In their studies, Allen¹⁸ and Lee et al⁹ describe nursing care activities as turbulent and stressing due to multiple tasks that need to be performed simultaneously. Heavy workload, overworking³⁴ and steady interruptions from other health care team members³⁶ do de-spirit nurses from using nursing care plans. Nursing notes are voluminous due to multiple tasks and differences in priority of nursing activities amongst various specialties thus prohibiting documentation of care in the nursing care plan.³⁵

2.6.3 Factors Related to the Nursing Administration

Leadership within nursing may either encourage or discourage use of nursing care plans. Incompetent nursing supervision,¹⁷ non-involvements of bedside nurses in both phases of designing the care plan²⁵ and the presence or absence of nursing care plan policy³⁷ have been linked directly to lack of use of nursing care plans by the nurses as well as inadequate staffing levels.³⁴ Likewise nursing care plans are perceived as imposed formalities for the administrative rather than practical purposes.¹⁸

2.6.4 Factors Related to the Nursing Care Plan

The details in the nursing care plan make it unfriendly to nurses. Previous studies indicate that the wide range of nursing care plan formats confuses nurses thus deterring their use.³¹ Further, the nurse claims that the care plan format is not based on the nursing process instead the unit routines.⁷

The design of the content is both unattractive and cannot be accommodated across all nursing specialties thus disqualifying their use in some units such as Intensive Care Unit and New Born Unit where the care is focused at handling emergencies almost always. Other assertions include: nursing care plans are less readily available, takes substantial time to fill at the expense of patient care and are prone to inaccuracies in the recorded information because they are filled retrospectively.^{25, 4, 38}

In summary the individual nurse, the nursing care activities, the nursing administration and the nursing care plan are thought to be the principal factors associated with hindering nurses from using the nursing care plan.

CHAPTER 3: METHODOLOGY

3.1 Study Design

This was a cross-sectional descriptive survey.

3.2 Study Area

The study was conducted at Kenyatta National Hospital (see appendix H) inpatient paediatric wards. They were seven in number and consisted of four general medical wards (3A, 3B, 3C & 3D) on level three, and three specialized wards i.e. neuro-surgical ward (4A) on level four, paediatric oncology ward (1E) on level one in the old hospital wing and New Born Unit (NBU) on level one next to the main operating theatres. This setting was preferred to others because it is a national referral hospital with a substantial number of nurses who are specifically trained in paediatric nursing. It was also easily accessible for the available time and money.

3.3 The Study Population

All 209 KNH employee nurses working in the inpatient paediatric wards formed the study population. This information was provided by the Chief Nurse of the hospital on 6th December 2006 (Table 1).

Table 1 Number of Nurses per Paediatric Ward at KNH

WARD	3A	3B	3C	3D	1E	4A	NBU	TOTAL
NURSES	28	25	28	29	19	23	57	209

KEY: Medical wards are 3A, 3B, 3C & 3D, Oncology ward-1E, 4A-Neurosurgical ward, NBU -New Born Unit.

3.4 Inclusion Criteria

Nurses who met the following characteristics were included in the study:

- All KNH full time employee nurses in inpatient paediatric wards who consented.
- Registered by the nursing council of Kenya and had at least 1 year working experience.

3.5 Exclusion Criteria

Nurses who met the following characteristics were excluded from the study:

- Non-KNH nurses working in the inpatient paediatric wards.
- All nurses on locum.
- All unregistered nurses.
- Nurses who had worked less than 1 year.
- Nurse absent from duty.
- Nurses who met the inclusion criteria but did not consent.

3.6 Sampling Frame and Units

A list of all nurses in those participating wards formed the sampling frame and the individual nurses formed the sampling units.

3.7 Sample Size Determination

The sample size determination was calculated using Cochran's formula ³⁹ for sample surveys as follows:

$$n = (1 - n/N) \times [t^2 (p \times q)] / d^2$$

= Finite population correction \times [probability level \times variance] / confidence interval

Where:

n = the sample size

N = the size of eligible study population which in this study was the 209 inpatient paediatric nurses

t^2 = the standard value of the standard deviation score that refers to the area under a normal distribution of values (in this study confidence level was set at 95% whose critical value t corresponds to 1.96 from the table of standard normal distribution)

p = the percentage category for which we are computing the sample size (p for this study was set at 0.50 because there is no reference proportion of the population with the characteristic of interest)

q = 1 - p (therefore, in this study q = 1.00 - 0.50 = 0.50)

d^2 = the squared value of one-half the precision interval around the sample estimate (in this study d is set at $\pm 5\%$)

Note: the finite population correction has very little effect on the end result when the size of the sample is less than 5% of the total population.

Substituting:

$$n = [1.96^2 \times (0.50 \times 0.50)] / 0.05^2 = 384.16$$

Because the sample calculated (384.16) is more than 5% of the eligible population size (209), the sample size was re-adjusted using the population correction factor.

Where the population correction factor was represented by

$$\begin{aligned} \hat{n} &= n / [1 + \{(n - 1) / N\}] \\ &= 384.16 / [1 + \{(384.16 - 1) / 209\}] \\ &= 135.587 \end{aligned}$$

It was estimated that a total of 136 nurses were to be selected for the study.

3.8 Sampling Method

Stratified random sampling was used to select the study subjects. The nurses were stratified into in-charge nurses and non in-charge nurses, and then a random sample of nurses within each stratum was taken.

3.8.1 Selection of study subjects

Selection of the in-charge nurses

One of the two in-charge nurses in each ward was selected randomly. This was achieved by writing number 1 and 2, each on a different slip of paper and folded, placed in a container, mixed well, and then one was drawn. In the case where there was only one present, then he/she was automatically recruited for the study.

Selection of the non in-charge nurses

For each ward, a list of non in-charge nurses was prepared by numbering sequentially from 1 for the first nurse at the head of the list to N for the last nurse. A proportional sample (table 2) in respect to each ward size was selected randomly using a table of random numbers.

Table 2 Numbers, Proportion & Sample Size of Non In-Charge Nurses from Each Ward

Ward identity	3A	3B	3C	3D	1E	4A	NBU	TOTAL
Number of non in-charges	26	23	26	27	17	21	55	195*
Proportion to ward size	26/195 x 100 = 13%	23/195 x 100 = 12%	26/195 x 100 = 13%	27/195 x 100 = 14%	17/195 x 100 = = 9%	21/195 x 100 = = 11%	55/195 x 100 = 28%	100
Sample size to draw	0.13 X 122 = 16	0.12 X 122 = 15	0.13 X 122 = 16	0.14 X 122 = 17	0.09 X 122 = 11	0.11 X 122 = 13	0.28 X 122 = 34	122

*=Number of non in-charge nurses in each ward is total number of nurses less the 2 in-charge nurses.

3.9 Data Collection

3.9.1 Data Gathering Instrument and its administration

A standardized self-administered questionnaire comprising of fixed response items was used to collect data. A summated scale on an interval scale of 5 was used to rate nurses' opinion in some aspects in to regard the care plan. Two questionnaires were used. The first questionnaire (appendix A) targeted the non in-charge ward nurses and was subdivided into three main sections namely: attributes related to the nurse, the nursing care plan and

the nursing care activities. The second questionnaire (appendix B) targeted the nurse in-charges and comprised of one section on administrative issues.

The research assistants contacted the participants in their wards at the beginning of each nursing shift. Request for names and identification was prohibited as any part of data collection. Individual surveys were not seen by anyone other than the participant and were filled independently. The nurses were requested to place their completed questionnaires in a designated "return" envelope.

3.9.2 Pre-testing of Study Instrument

A piloting exercise was conducted amongst 14 paediatric ward nurses at KNH who were excluded from the final study. This was at least 10% of the actual study sample size³⁹ i.e. $10\% \times 136 = 13.6$. 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.

3.9.3 Selecting and Training of Research Assistants

Two research assistants who were interns at KNH and holding a bachelor's degree in nursing were recruited and trained by the principal investigator. They attended a 2-day training that covered on the following:

- Description and an orientation to all relevant components of the study
- The aim and purpose of the study
- Protocols of administering the questionnaire to the respondents

- The importance of collecting accurate, complete and reliable data
- Running through the questionnaire to clarify non-clear items so as to have a common meaning of questions and the expected responses.

3.10 Data Processing and Analysis

3.10.1 Data Processing

Of the targeted 136 nurses, 122 responded (response rate of 89.7%). Fifteen questionnaires from the non in-charge nurses were discarded following data cleaning i.e. each returned questionnaire was checked for its completeness; ambiguous and incomplete answers were corrected soon before the subjects left. They were also edited for legibility and then coded before entering them into an SPSS data base.

3.10.2 Data Presentation And Analysis

The data was summarized and presented in frequency tables and proportions with the aid of SPSS/PC program. The Pearson product Moment Correlation was used to determine the association between the independent and dependent variables. The cut off level for statistical significance was taken at $p < 0.05$

3.11 Minimizing Biases

The followings were followed to minimize bias:

- To achieve representativeness subjects were selected by stratified random sampling.
- The two standard questionnaires used i.e. on in-charge and non in-charge nurses were pre-tested to ensure that they collected reliable and valid information. Items that failed to meet the minimum total correlation level of .25 were eliminated.

- The research assistants were trained prior to the study on the questionnaire administration techniques and were supervised during the study.
- All respondents were explained by the research assistants the importance of completely filling in the questionnaire and returning it intact.
- Confidentiality of the provided responses was emphasized.

3.12 Ethical Consideration

Prior to the actual study approval was sought from the Ministry of Education & Science and Technology, and Ethics and Research committee of KNH. An informed consent was obtained from all subjects under the Standard principles of the right to know the purpose of the study, the expected benefits of the study, non-commercial use of the information gathered, procedure(s) and any potential risk(s) involved, assurance of anonymity and confidentiality of the provided responses by not providing any identification information such as names and the right to refuse or withdraw from the study (see appendix C).

The study results and recommendations will be disseminated to the nursing fraternity and to any other interested academic community. Efforts will be made to publish the study in a nursing journal so as to reach a wider audience.

CHAPTER 4: RESULTS

Presentation of the results is as per the four main themes i.e. factors related to the nurse, nursing work, nursing care plan, and nursing administration as follows:

4.1 THE NURSE-RELATED FACTORS.

The age of the nurse, highest nursing qualification, length of stay in the current ward, documenting tool emphasized on training, care plan use in the last one year, perceived importance of care plan and attendance on continuing education were the personal background variables examined (summarized in Table 3).

Of the 100 non in-charges Paediatric ward nurses at KNH, 42 (42%) were 20 to 30 years old, 37 (37%) were 31 to 40 years old and 21 (21%) were 41 to 50 years old. Nurses who had attained a nursing diploma were 53 (53%) and a certificate was 27 (27%). Those who had served their present ward for 1 to 5 years were 64 (64%). This indicates that most nurses are relatively young and holds a diploma in nursing.

Slightly over half (or 52%) nurses reported the nursing care plan as the tool recommended for documenting care during their training in nursing and 65 (65%) of them regarded the care plan as very important. On the other hand, of the seven in-charge nurses three

(42.9%) revealed that nurses in their wards attended continuing education on care plans irregularly whereas four reported (57.1%) weekly attendance (Table 6).

Table 3 Demographic and other related nurse Characteristics (N = 100)

Characteristics		n (%)
Nurses' age in years	20-30	42 (42)
	31-40	37 (37)
	41-50	21 (21)
Highest nursing qualification	Certificate	27 (27)
	Diploma	53 (53)
	Advanced Diploma	6 (6)
	Bachelors Degree	14 (14)
Years served in current ward	1-5	64 (64)
	6-10	26 (26)
	11-15	8 (8)
	16-20	2 (2)
Tool emphasized in training	Cardex	41 (41)
	Nursing care plan	52 (52)
	Report card	7 (7)
Care plan use in last one Year	Yes	62 (62)
	No	38 (38)
Care Plan use currently	Yes	2 (2)
	No	89 (89)
Perceived importance of Care plan	Very important	65 (65)
	Somehow important	19 (19)
	Not too important	9 (9)
	Not at all important	7 (7)
Currently used tool by nurses	Nursing Cardex	73 (73)
	Piece of paper	10 (10)
	Care plans	11 (11)
	Computer based	2 (2)
	Report Card	4(4)

Only 2 (2%) of the nurses reported use of care plans in their wards currently compared to 62 (62%) who reported having used them in the course of the last one year at some point. The nursing care index (Cardex) was used by 73 (73%) of the nurses compared to other documenting forms evaluated such as the computers (2%), report cards (4%) and papers

(10%). Nurses reported having used care plans under different conditions and on last using them, 28 (28%) of the nurses used them because their colleges needed them do so and 36 (36%) used them under individual drive.

4.2 THE NURSING WORK RELATED CHARACTERISTICS

The level of stress in nursing, workload, interruptions from fellow health workers and patients or relatives of the patients was measured using a summated rating scale. They are summarized in the frequency Table 4.

Table 4 Stress, Interruptions and Workload (N = 100)

Parameters		n (%)
Stress	Very stressing	34 (34)
	Stressing	50 (50)
	Less stressing	11 (11)
	Not stressing	5 (5)
Interruptions	Always	19 (19)
	Frequently	47.5 (47.5)
	Seldom	19.5 (19.5)
	Never	14 (14)
Workload	Heavy	74 (74)
	Medium	24 (24)
	Low	2 (2)

Only 5 (5%) nurses reported the nursing work as not stressing, and 2 (2%) said that the nursing workload per day was low. On interruptions, 47.5% nurses reported frequent interruptions and 14% noted no interruptions from fellow health workers, the patient himself and relatives of the patient. The nursing workload was scored as heavy by 74% of the non in-charge nurses. The nurses attributed Stress (70%) and workload (75%) in the nursing work respectively to non-use of nursing care plans in the paediatric wards.

4.3 THE NURSING CARE PLAN-RELATED CHARACTERISTICS

Familiarity with a nursing care plan as whole and its five major headings i.e. nursing diagnosis, Expected outcome, Intervention, Rationale and Evaluation were measured. Similarly, how friendly it is to use; the informativeness; the ease to update, read, and understand; suitability to the patient; format usefulness and comprehensiveness of relevant information in the care plan were measured (summarized in table 5).

Of the 100 non in-charge nurses, 83 (83%) revealed being at least familiar, 15 (15%) were not very familiar and 2 (2%) were unfamiliar with each of the five headings of the care plan. How user friendly a care plan is in terms of ease to use, informative-ness, ease to update, suitability to the patient, ease to understand, ease to read, and format usefulness were each scored as always, mostly, sometimes, never and don't know in decreasing order of strength. A majority of the nurses (70.8/100, 70.8%) reported that the nursing care plan was at least mostly user friendly.

Table 5 Nursing care plan related factors (N = 100)

Care Plan Characteristics		n (%)	Cumulative %
Headings	Very familiar	44 (44)	44.0
	Familiar	39 (39)	83.0
	Not very familiar	15 (15)	98.0
	Unfamiliar	2 (2)	100.0
User friendly	Always	38.3 (38.3)	38.3
	Mostly	32.5 (32.5)	70.8
	Sometimes	23.7 (23.7)	94.5
	Never	4 (4)	98.5
	Don't know	1.5 (1.5)	100.0
Comprehensiveness	Very comprehensive	42 (42)	42.0
	Bigger extent	34 (34)	76.0
	Smaller extent	24 (24)	100.0
When care plan is filled	End of shift	21 (21)	21.0
	On going	55 (55)	76.0
	Start of task	12 (12)	88.0
	Beginning of shift	12 (12)	100.0
Purpose of Care plan	Professionalism	28 (28)	28.0
	Nurse in-charge	5 (5)	33.0
	Clinical care	65 (65)	98.0
	Nursing administration	2 (2)	100.0
Focus of Care plan	Patient oriented	84 (84)	84.0
	Nursing administration	16 (16)	100.0
Length of filling	10 - 15 minutes	52 (52)	52.0
	16 - 20 minutes	15 (15)	67.0
	21 - 25 minutes	20 (20)	87.0
	26 minutes and more	13 (13)	100.0

The comprehensiveness of relevant information was rated as very comprehensive, to a bigger extent, and to a small extent in a decreasing order of strength. It was revealed by a majority (42/100, 42%) of the nurses to be very comprehensive. Slightly over half of the nurses (55/100, 55%) pointed out that care plans are filled on the on-going basis i.e. as one patient care task is accomplished after the other as opposed to 12 (12%) of those who said they filled them at the start of each nursing shift.

Sixty five (65%) of the nurses revealed that the purpose of the care plans is to guide patient clinical care and 28 (28%) said care plans served nursing professionalism. Most nurses (84/100, 84%) said that care plans are patient care oriented and 52 (52%) nurses identified 15 minutes or less as the time taken to document care in care plans.

4.4 THE NURSING ADMINISTRATION DETERMINED FACTORS

Seven in-charge nurses, one from each ward, were the informants on nursing care documentation policy, their support or non-support on care plans, use of incentives to motivate nurses to use care plans, the adequacy of nursing staff and the modality of nursing practiced in the wards they supervised and the subsequent influence of each one on care plan utilization. The Summary of the responses is in table 6 (see appendix I).

Of the seven in-charges, all (100%) revealed that a policy on documenting care existed. Five (71%) supported the existing policy, three (43%) indicated that the policy supports the

nursing care index and two (29%) said it supported the nursing care plans. Four (57%) in-charges supported use of the nursing care plans use in their wards.

Six out of the seven nurses said they do not give incentives to motivate nurses and one of them said that she praises those nurses who use care plans. Three in-charges (43%) rated the nursing staff level as inadequate and two (29%) as fairly adequate. Six of them (86%) revealed that the current staffing level of nurses in the wards contributed partly to non-use of care plans. Three in-charges (43%) reported the practice of primary nursing in their wards whereas three (43%) reported a mixture of various nursing modalities and one reported team nursing. Five in-charges (71%) implicated the modality of nursing practiced in the non-use of nursing care plans.

4.5 STATISTICAL ANALYSIS

The Pearson Product Moment Correlation was used to measure the association between categories of independent variables (characteristics related to the Nurse, Nursing work, Care plan and Nursing administration) and the dependent variable (nursing care plan utilization).

Table 7 provides a summary of the measure of association for the entire sample, in the form of Pearson's product moment correlation coefficient (r 's), for a select group of variables. Each of the independent variable has some linear relationship with the dependent variable (using nursing care plans). It was concluded that linear relationship was

statistically significant if the p-value obtained was less than or equal to 5% ($p \leq 0.05$), i.e. the null hypothesis could be rejected as interpreted in the subsequent paragraphs.

Table 7 Pearson Product-Moment Correlations between select variables

Independent Variables		Nursing Care Plan Use	
		Pearson Correlation (r)	Sig. (2-tailed)
Nurse-related characteristics(N=100)	Age	.026	.796 NS
	Qualification	.007	.941 NS
	Years served	.135	.181 NS
Nursing work-related characteristics(N=100)	Stress	-.027	.786 NS
	Workload	.099	.328 NS
Care plan-related characteristics(N=100)	Familiarity with Content	.198	.049*
	Ease to update	.013	.897 NS
Nursing administration-determined factors(N=7)	Level of nursing staff	.192	.680 NS
	support for care plan policy	.277	.547 NS

* = Indicates that the association between 2 variables in question is significant at or below the 0.05 level.

NS = Not significant i.e. $p > 0.05$

The personal background of the nurse i.e. age ($r = .026$, $p = .796$), qualification ($r = .007$, $p = .941$) and length of service($r = .135$, $p = .181$) shows weak positive correlations with utilizing nursing care plans which are not statistically significant. This is consistent with the first hypothesis which states there is no relation between personal factors and care plan use.

The stress in nursing work($r = -.027$, $p = .786$) is weakly negative correlated with utilizing nursing care plans. The nursing workload ($r = .099$, $p = .326$) is weakly positive correlated

with nursing care plan utilization. However the linear relationships of both stress and nursing workload with utilizing the nursing care plan are not statistically significant. In consequence, the second hypothesis of no relation between nursing work characteristics and utilization of care plans was supported.

Familiarity with the contents of the nursing care plan ($r = .198$, $p = .049$) had a weak positive linear relationship with utilizing nursing care plans and was statistically significant. The ease with which the design can allow updating ($r = .013$, $p = .897$) had a weak positive correlation with utilizing nursing care plans but was not statistically significant. Thus the third hypothesis of no relation between nursing care plan-related factors (content and design of the care plan) and care plan utilization was partially supported by the current study.

Both the nursing staff level ($r = .192$, $p = .680$) and support for the nursing care plan documentation policy ($r = .277$, $p = .547$) had a weak positive linear relationships with the nursing care plan use which were statistically non significant. This was in agreement with the fourth hypothesis of no relation between nursing administration-determined factors (care plan policies and staffing level of nurses) and the nursing care plan utilization.

CHAPTER 5: DISCUSSION

Documenting nursing care in a nursing care plan is an essential element of good professional nursing practice. The focus of current nursing practice and training is on proper use of nursing care plans because the plan communicates the patient's health progress to all partners involved in health care delivery.

5.1 The characteristics of the nurse

This study shows that the age, level of nursing qualification attained, years of service in a given ward and the tool emphasized in training have a positive correlation with utilizing the nursing care plans though not statistically significant. This is in support of past similar studies^{16, 22} that reveal an increase in utilization of nursing care plans with a higher qualification in nursing, more years of service and a relatively younger age. The non significance could possibly be attributed to the weak correlation coefficients and a small sample studied. Most (42%) nurses working in KNH paediatric wards are relatively young (20 to 30 years old), hold a diploma in nursing (53%) and have served their current wards for less than five years (64%).

Serving one ward for a long period of time has been associated with failure to use care plans as observed in a previous study¹¹ which indicates that nurses become over familiar with their supervisors to the extent of not following supervision on care plans. Too, there is a risk of regressing to archaic ways of oral reporting. Previous studies conducted on care

plan utilization have found out a decrease in care planning with advancing age of the nurse^{35, 36}, thus expecting the relatively young age of nurses at the paediatric wards to be protective of care plan use as opposed to this study.

Other researches^{32, 14} done elsewhere reveals that the tendency to change from traditional methods of documenting care to the current use of nursing care plans as well as having a positive outlook on nursing care plans tend to decrease with a decrease in nursing qualification of the nurse which is contradictory with the present study.

5.2 Nursing Work Characteristics

The correlation between the levels of stress and utilizing care plans was weakly negative. This suggests that as the levels of stress in nursing work increases the tendency to document in nursing care plans decreases amongst paediatric ward nurses. This is in agreement with findings in a study that explores factors inhibiting the usefulness of a care plan.¹⁰

On the hand the correlation between the amount of work and utilizing care plans was weakly positive. This indicates that use of care plans increases with increase in the nursing workload. This is does not concur with similar previous studies. Researches^{30, 4} that have related stress and workload with nursing care plan use have found out that heavy workload and stress discourages nursing care plan utilization. They also suggest that wards with

acutely ill patients such as NBU require the nurse to act immediately thus leaving her with no time to document cares. The heavy and multiple nature of nursing work is a stumbling block to care plan utilization amongst nurses as pointed out in other studies^{35, 36} elsewhere.

5.3 Nursing Care Plan Characteristics

Being familiar with the care plan content was weakly positive and significantly linearly correlated with care plan utilization. This finding extends those of O'Connell and colleagues⁷ who found in their study that more nurses are likely to use care plans if they were familiar with the design of the care plans. This includes the five standard headings in the care plan i.e. the nursing diagnosis, the goal, the intervention and the rationale. Responses from KNH paediatric wards reflect this conformity since 83% of the nurses are at least familiar with the with the nursing care plan design.

On the other hand, the ease with which the design of the care plan can allow updating was positively associated with care plan utilization though not significant which is a mixed finding in this study. The latter may be influenced with a smaller sample size. Nurses' responses were also contradictory since a large proportion (94.5%) rated the care plan as at least sometimes user friendly and 65% understood the usefulness of care plans but in practice only few nurses use them (11%). Studies relating nurses' knowledge on care plans and care plan utilization^{22, 35} have found out that nurses who are knowledgeable in the format, contents and how care plans are charted are more likely to utilize them. Griffiths

and Huthings ³⁴ found out that lack of knowledge on care plan charting and the nursing process were contributing factors to low utilization of care plans amongst nurses.

Beyond knowledge, other factors such as the complexity and time taken to document in the care plans ²⁵ have a negative influence on nurses' use on care plan utilization because they are abandoned soon after graduating from training schools. ³¹

5.4 Nursing Administration Characteristics

A positive linear relationship that was not significant between care plan utilization and nursing administration factors (level of nursing staff and care plan policy) was found. This is in conflict with earlier research findings revealing that the nursing administration plays a significant role in care plans utilization. Factors such as the presence of a written policy on documenting care in nursing care plans, availing a readily pre-printed care plan format, continuing training on how to use nursing care plans and supervision on their use have resulted in adherence to using care plans. ^{37, 33, 5}

The nursing administration sets policies in regard to nursing practice in any setting. The nurse managers continuously models attitudes, knowledge, and skills of nurses. Therefore one would expect a significant positive relation between nursing care plan utilization and the nursing administration as opposed to findings in this study. In their study on nurses' knowledge and attitude on documentation Darmer and colleagues⁸ found out that a high

degree of support from the nursing management is necessary for the care plans to be effectively used.

A nursing care plan works well in healthcare centers where the nursing process is built on a private-practice model which assumes a one-to-one professional client-relationship (primary nursing). This mode of primary nursing is not practical at the Kenyatta National Hospital wards since there is a shortage of nurses and a high patient load. Only one of the seven in charge nurses (14.3%) revealed that the shortage of nursing staff does not affect nursing care plan utilization. The ward nurse managers in some hospitals lack the necessary motivation to consistently maintain follow up nurses working under them who do not properly or who do not implement nursing care plans at all.¹⁸

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

In this study a small random sample was studied, composed primarily of nurses from the Kenyatta National Hospital paediatric wards for logistic reasons and time. Therefore caution should be taken in generalizing study findings.

Using a questionnaire as a method of investigation was chosen because of limited time for the study thus participant observation or structured interviews as a method of survey, which may have produced more reliable data, was eliminated. It should be borne in mind that factors external to the questionnaire but involved with the process of the study such as tiredness and negativity to participating in research may have led to bias in some responses. The questionnaire inevitably sacrifices some depth for increased breadth of coverage and this should be borne in mind when reading the results.

In conclusion, to achieve widespread adoption of nursing care plans amongst nurses, nurse managers and other nurses need understand and address the barriers behind low utilization of care plans and specific the setting (hospital). The influence of nurse managers on junior nurses to document nursing care in care plans can be used in various ways. This includes provision of materials such as pens and pre-printed care plan papers, increasing the nurse to patient ratio, discouraging other forms of charting such as using pieces of paper and orienting other health care team members to care plans. Further, nurses need be involved in the design and implementation of care plans rather than being pushed onto

them from their managers. A positive attitude towards using care plans should be nurtured and maintained amongst the nurses.

The followings recommendations were suggested:

1. The need to study a larger random sample to facilitate a more generalization of findings.
2. To replicate the study in other categories of hospitals such as the private, the public (provincial and district), and faith-based hospitals for the purpose of comparison.
3. A wide range of factors need to be measured in similar researches in future since there is an interaction of multiple factors in the utilization of care plans.
4. The continuing education department of the hospital should be involved in creating awareness amongst nurses on using care plans since learning is a powerful tool that can influence behavior change.
5. There is need to integrate the nursing process with care planning since the development of the nursing care plan stems from the nursing process. Thus training of nurses should lay emphasis in all these in order to instill a positive attitude towards care planning earlier before one embarks on professional practice.
6. To facilitate uniformity in care planning, the nursing care plans should be standardized under the international standards of the North American Nursing Diagnoses Associations (NANDA).¹⁰ However it can be modified to fit the nursing

tasks as well as medical tasks on the ground. A pre-printed care plan format should be placed in close proximity to each patient for immediate access.

7. A standardized care plan training manual should be provided in the wards to aid implementation of the nursing process and nursing care plan according to the international standards of nursing practice.
8. Computerize care planning in settings where electricity is available and other resources such as computers can allow. This is expected to increase efficiency and effectiveness in documenting patient care.

Implications of the study

This study has clear implications on the four areas of nursing if the barriers to using nursing care plans are addressed effectively and subsequently gain wider acceptance in the practice of nursing, namely: nursing education, nursing research, nursing administration and nursing practice. Firstly, Care plans are built on a sound foundation of scientific knowledge, particularly of patho-physiology, total responses to stress and rationale of treatment. Thus can be used by both students and working nurses to broaden their knowledge base, observation and interpretation. Secondly, a nursing care plan is organized around the patient's problems (labeled as nursing diagnoses) and is an objective way of measuring the outcomes of the interventions implemented. Therefore health care workers engaged in research can access readily available, valid, reliable and comparable nursing data

that can be of use in the research process. Thirdly, care plans serve as an evidence of what has been done about a patient's problem, thus protecting the nurses and nurse managers against unnecessary legal actions being taken against them. Finally, proper charting of care plans would reflect individualized patient care which professional nursing requires of nurses in the current nursing practice.

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APPENDIX A: THE NON IN-CHARGES QUESTIONNAIRE

TOPIC: TO DETERMINE FACTORS HINDERING PEDIATRIC WARD NURSE FROM USING NURSING CARE PLANS AT KENYATTA NATIONAL HOSPITAL

PURPOSE: This is to identify factors hindering pediatric nurses from using the nursing care plans in view of improving their use.

INSTRUCTIONS

You are requested not to write your name since your responses are confidential.

For each question, in section **I** to **III**, please circle only **ONE** response unless otherwise instructed.

SECTION I: THE NURSE

Q 1.1 Your age, (in completed years)?

1. 20 - 30
2. 31 - 40
3. 41 - 50
4. 51 - 60

Q 1.2 What is your highest level of nursing qualification attained?

1. A nursing certificate
2. A nursing diploma
3. Advanced nursing diploma
4. Undergraduate degree in nursing
5. Postgraduate degree in nursing

Q 1.3 How many years have you served at the current ward?

- a. 1 - 5
- b. 6 - 10
- c. 11 - 15
- d. 16 - 20
- e. 21 & more

Q 1.4, which care documentation tool, was emphasized in your last training?

- a. Cardex
- b. Nursing care plan
- c. Report cards
- d. Piece of paper

Q 1.5 Which nursing care documentation tool are you currently using?

1. Nursing Cardex
2. Piece of paper
3. Computer based data
4. Report cards
5. Nursing care plan

Q 1.6 Have you used a nursing care plan in the last one year?

1. Yes
2. No

Q 1.7 Under what conditions did you last use a nursing care plan?

1. In nursing training college
2. Required by my nursing in-charge
3. Requested by Nursing students
4. It was my own initiative

Q 1.8 How important is it to you to document nursing care in the care plan?

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important

Q 1.9 In which nursing document does your nurse in-charge require you to record nursing care given?

1. Nursing care plans
2. Nursing cardex
3. Piece of paper
4. Report cards

Q 1.10 How do other health care workers, e.g. doctors value nursing care plan?

1. Very much
2. To some extent
3. To a little extent
4. Not at all

SECTION II: NURSING WORK

Q 2.0 How do you rate the level of stress in nursing work?

1. Very stressing
2. Stressing
3. Less stressing
4. Not stressing at all

Q 2.1 Does stresses in nursing work deter you from using the nursing care plan?

1. Yes
2. No

Q 2.2 How do you rate the nursing workload, on average, in a single working day?

1. Heavy
2. Medium
3. Low

Q 2.3 Does the nursing workload prevent you from using the nursing care plan?

1. Yes
2. No

Q 2.4 Do fellow health care workers interrupt your work?

1. Yes
2. No

Q 2.5 If yes, how often do they interrupt your work?

1. Always
2. Frequently
3. Seldom
4. Never

Q 2.6 How often do patients / patients' relatives interrupt you?

1. Always
2. Frequently
3. Seldom
4. Never

SECTION III: NURSING CARE PLAN

Q 3.1 Are you familiar with the nursing care plan?

1. Yes
3. No

Q 3.2 If yes, how familiar are you with the nursing care plan headings about – (for each option, circle the number that represents the best rating)

	Very familiar	Familiar	Not very familiar	Unfamiliar
a. Nursing diagnosis	1	2	3	4
b. Expected outcome	1	2	3	4
c. Intervention	1	2	3	4
d. Rationale	1	2	3	4
e. Evaluation	1	2	3	4

Q 3.3 How user friendly would you rate nursing care plans in the following terms?
 (For each option, circle the number that represents the best rating)

	Always	Mostly	Sometimes	Never	Don't know
a. Ease to use	1	2	3	4	5
b. Informative	1	2	3	4	5
c. Ease to update	1	2	3	4	5
d. Suitable to your patient	1	2	3	4	5
e. Ease to understand	1	2	3	4	5
f. Ease to read	1	2	3	4	5
g. Format usefulness	1	2	3	4	5

Q 3.4 How do you rate the comprehensiveness of relevant information of nursing care in a care plan? (Circle the single best rating)

1. Very Comprehensive
2. To a bigger extent comprehensive
3. To a small extent comprehensive
4. Not comprehensive

Circle the most appropriate response for question 3.5 to 3.8

Q 3.5 How do you fill in the nursing care plan?

1. At the end of the nursing work shift
2. On-going as I deliver one task after the other
3. At the beginning of each task.
5. At the beginning of the nursing work shift

Q 3.6 Whose purpose does a nursing care plan serve?

1. My nursing professionalism
2. My Nurse in charge
3. Guide patient's clinical care
4. The nursing administration

Q 3.7 What is your opinion on the focus of the nursing care plans?

1. Patient oriented
2. Nursing administration oriented

Q 3.8 How long does it take to fill a nursing care plan?

1. 10 - 15 minutes
2. 16 - 20 minutes
3. 21 - 25 minutes
4. 26 minutes and above

THANK YOU FOR YOUR RESPONSES, THEY ARE COMPLETELY CONFIDENTIAL.

APPENDIX: B THE INCHARGES QUESTIONNAIRE

TOPIC: TO DETERMINE FACTORS HINDERING PEDIATRIC WARD NURSES FROM USING NURSING CARE PLANS AT KENYATTA NATIONAL HOSPITAL

PURPOSE: This is to identify factors hindering pediatric nurses from using the nursing care plans in view of improving their use.

INSTRUCTIONS

You are requested not to write your name since your responses are confidential.

For each question 1.1 to 1.12 please circle only ONE response unless otherwise instructed.

SECTION I: NURSING ADMINISTRATION

Q 1.1 Do you have any nursing care documentation policy in your ward?

1. Yes
2. No

Q 1.2 If yes, it regards to which documentation tool?

- a. Nursing cardex
- b. Report card
- c. Computer based
- d. Care plans

Q 1.3 Do you support it?

1. Yes
2. No

Q 1.4 In which nursing documentation tools do nurses document care in your ward?

- a. Care plans
- b. Cardex
- c. Report cards
- d. Piece of paper

Q 1.5 To what extent do you support use of nursing care plans in your ward?

1. Very strongly
2. Strongly
3. To some degree
4. Not at all

Q 1.6 Do you provide any incentive nurses to use nursing care plans?

1. Yes
3. No

Q 1.7 If yes, what incentives do you give?

1. Letter of recommendation
2. Some time off
3. Any other (specify)
4. None

Q 1.8 How regular do nurses in your ward attend continuing education on nursing care plans?

1. Weekly
2. Monthly
3. Once every 3 months
4. Irregularly

Q 1.9 What is the level of staffing of nurses in your ward?

1. Very adequate
2. Adequate
3. Fairly adequate
4. Inadequate

Q 1.5 To what extent do you support use of nursing care plans in your ward?

1. *Very strongly*
2. Strongly
3. To some degree
4. Not at all

Q 1.6 Do you provide any incentive nurses to use nursing care plans?

1. Yes
3. No

Q 1.7 If yes, what incentives do you give?

1. Letter of recommendation
2. Some time off
3. Any other (specify)
4. None

Q 1.8 How regular do nurses in your ward attend continuing education on nursing care plans?

1. Weekly
2. Monthly
3. Once every 3 months
4. Irregularly

Q 1.9 What is the level of staffing of nurses in your ward?

1. Very adequate
2. Adequate
3. Fairly adequate
4. Inadequate

Q 1.10 Does the nursing staffing level in this ward contribute to your non-use of the care plans?

1. Yes
2. No

Q 1.11 What modality of nursing is practiced in your ward?

1. Primary nursing
2. Functional nursing
3. Case method
4. Team nursing
5. Modular nursing
6. Mixture of the above

Q 1.12 Does the nursing modality used favor the use of nursing care plans?

1. Yes
2. No

THANK YOU FOR YOUR RESPONSES, THEY ARE COMPLETELY CONFIDENTIAL.

APPENDIX: C

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

TITLE OF RESEARCH STUDY

Factors hindering pediatric ward nurses from using Nursing Care Plans at KNH.

INVESTIGATOR

Mr. NOA NYABERI MBUNYA, Nursing school, University of Nairobi, phone 0723411055.

STUDY PURPOSE

The purpose of the study is to identify factors, particularly relating to the nurse, nursing work, nursing administration, and the nursing care plan hindering nurses from using the nursing care plans.

PROCEDURES:

If I agree to participate, I understand that:

1. The study is done in partial fulfillment for the award of the Master of Science in nursing degree of the University of Nairobi
2. I was selected randomly to participate in this study
3. I will participate in the study at KNH at a time convenient to me
4. I will be asked to fill a questionnaire that will take 30 to 45 minutes to complete

BENEFITS

There are no direct benefits for me. However, it will help understanding of the use of nursing care plans that will improve nursing care documentation and ultimately quality of care.

RISK

There are no potential risks foreseen to be involved, as I will be required to fill in a questionnaire only.

CONFIDENTIALITY

The results of this study will be discussed with me. Except for this disclosure, all information obtained in this study will be considered confidential and used only for research purpose. My identity will be kept confidential in so far as the law allows.

QUESTIONS

The research assistant, _____ (name), has discussed the information with me and offered to answer my questions. For any further questions, I can contact him at cell No. 07_____ or Mr. NOA MBUNYA, the principal investigator, at 0723411055

RIGHT TO REFUSE OR WITHDRAW

My participation is entirely voluntary but essential to the success of this study. I am free to refuse to take part or withdraw at any time without affecting my future relation with the Nursing school of the University of Nairobi or my employer.

CONSENT

I agree to participate in this study. I have been given a copy of this form and had a chance to read it.

My signature: _____ Research assistant's signature _____ Date _____

APPENDIX D:

WORKPLAN AND TIME FRAME

ACTIVITY	DURATION	PERIOD
A. Identify problem, review literature & develop a proposal	8 weeks	1 st October - 30 th November 2006
B. Present proposal to the school of Nursing	4 weeks	1 st to 30 th December 2006
C. Refine & Submit proposal to KNH Research & ethics committee for approval	4 Months	January to may 2007
D. Re-Submission of proposal Ethics & Research committee.	4 weeks	1 st may to June 15 th 2007
E. Select & Train research assistants	2 days	June 28 th to June 30 th 2007
F. Pre-testing of Questionnaires		July 1 st to July 5 th
G. Data collection, processing and analyzing	2 weeks	July 6 th to July 20 th , 2007
H. Write a final report	2 week	July 20 th to 2 nd August 2007
I. Present final report to the school of nursing & refine it thereafter	1 Day	1 st week of August, 2007
J. Dissertation to the external examiner	4 Weeks	Month of August, 2007
K. Final oral defense	1 Day	Day scheduled in September, 07

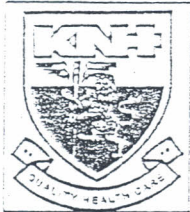
APPENDIX E: BUDGET

Survey Tasks and Cost Projections

ITEM	UNITS	COST@ UNIT (Kshs)	AMOUNT (Kshs)
A. STATIONERY			
Fools caps paper	2 Reams	500.00	1,000.00
Printing paper	4 Reams	500.00	2,000.00
USB Flash Disk(128MB)	1 x 2	1,500.00	3,000.00
Ball Pens	1 Dozen	200.00	200.00
Pencils	1 Dozen	80.00	80.00
Erasers	2 pieces	20.00	40.00
Stapler & staples	1pair	400.00	400.00
Calculator	1	1,000.00	1,000.00
Paper punch	1	280.00	280.00
B. TYPING,PRINTING AND PHOTOCOPYING SERVICES			
Proposal typing & printing	50 pages	20.00	1,000.00
Proposal photocopying	3 copies	100.00	300.00
Questionnaires photocopying	90 x 60 Pages	2.00	1,080.00
Final report typing & printing	60 pages	20.00	1,200.00
Final report photocopying	3 x60 Pages	2.00	360.00
C.PERSONNEL/HUMAN RESOURCES			
Ethical committee review	Fee x 1	500.00	500.00
Research assistants training	2 x1 day	500.00	1,000.00
Allowance (pretesting) for 2 Research assistants	2 x1 day	1,200.00	2,400.00
Allowance for investigator on Pretesting	1 x1 day	2,000.00	2,000.00
Allowance for Biostatician for Whole period of research	1	15,000.00	15,000.00
Allowance for investigator for whole period of research	1	25,000.00	25,000.00
Allowance for research assistants For whole period of data collection	2	7,500.00	15,000.00
Sub Total			72,840.00
15% Contingencies			10,926.00
GRAND TOTAL			83,766.00

APPENDIX: F

AUTHORIZATION BY KNH ETHICS COMMITTEE TO CONDUCT RESEARCH



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

Ref: KNH-ERC/01/4495

28th June 2007

Noa N. Mbunya
Dept. of Nursing Sciences
School of Medicine
University of Nairobi

Dear Noa

RESEARCH PROPOSAL: "FACTORS HINDERING PAEDIATRIC WARD NURSES FROM USING
NURSING CARE PLANS AT KNH" (P22/2/2007)

This is to inform you that the Kenyatta National Hospital Ethics and Research Committee has reviewed and approved your above revised research proposal for the period 28th June 2007 – 27th June 2008.

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 specimen must also be obtained from KNH-ERC for each batch.

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

This information will form part of database 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-ERC

c.c. The Deputy Director OS, KNH
Prof. K.M. Bhatt, Chairperson, KNH-ERC
The Dean, School of Medicine, UCN
The Chairman, Dept. of Nursing Sciences, UCN
Supervisors: Dr. Omuga, Dept. of Nursing Sciences, UCN
Mrs. Bitok K.L. Dept. of Nursing Sciences, UCN
Mrs. Rajula, Dept. of Nursing Sciences, UCN

AUTHORIZATION LETTER BY MINISTRY SCIENCE AND TECHNOLOGY



REPUBLIC OF KENYA
MINISTRY OF SCIENCE & TECHNOLOGY

Telegrams: "SCIENCE TEC", Nairobi
Telephone: 02-313531
E-Mail: ps@scienceandtechnology.go.ke

JOGOO HOUSE "B"
HARAMBEE AVENUE,
P.O. Box 9533-00200
NAIROBI

When Replying please quote
Ref. MOST 13/001/ 37C 489/2

3rd August 2007

Noan Nyaberi Mbunya
University of Nairobi
P.O. Box 30197
NAIROBI

Dear Sir

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on, '*Factors Hindering Pediatric Ward Nurses from Using Nursing Care Plans at Kenyatta National Hospital*'

I am pleased to inform you that you have been authorized to carry out research the Kenyatta National Hospital for a period ending 30th July 2008.

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

On completion of your research, you are expected to submit two copies of your research report to this office.

Yours faithfully


M. O. ONDIEKI
FOR: PERMANENT SECRETARY

Copy to:

The Director
Kenyatta National Hospital
Nairobi

APPENDIX: H

RESEARCH CLEARANCE PERMIT FROM THE MINISTRY OF SCIENCE AND TECHNOLOGY

PAGE 2

PAGE 3

Research Permit No. MOST 13/001/37C 489
Date of issue 3.8.2007
Fee received SHS.500.00

THIS IS TO CERTIFY THAT:

Prof./Dr./Mr./Mrs./Miss NOAH
NYABERI MBUNYA

of (Address) UNIVERSITY OF NAIROBI
P.O.BOX 30197 NAIROBI

has been permitted to conduct research in
KENYATTA NATIONAL HOSPITAL Location,
NAIROBI District,
NAIROBI Province,

on the topic FACTORS HINDERING PEDIATRIC
WARD NURSES FROM USING NURSING CARE
PLANS AT KENYATTA NATIONAL HOSPITAL

for a period ending 30TH JULY 2008



(Signature)
Applicant's
Signature

SECRETARY
SCIENCE AND TECHNOLOGY
M. MOUNDIEKI
FOR: Permanent Secretary
Ministry of
Science and Technology

APPENDIX: I

PREVIEW OF KENYATTA NATIONAL HOSPITAL

Kenyatta National Hospital is the largest Teaching and Referral Hospital in Kenya. It is located in Nairobi province about 3km from the Nairobi central business district. The Hospital was set up during colonial times when it was referred to as King George's Hospital. The Hospital also receives patients from other regions in Africa.

It has now a capacity of 2000 beds. Its many clinical departments include: department of medicine, department of surgery, department of obstetrics and gynecology, department of pediatrics, laboratory department, radiology department, other departments/wards fall under the above i.e. ICU, theatres, Renal unit, trauma and emergency unit.

The hospital has a pediatric department divided into the following units: New Born Unit, Pediatric Oncology, Pediatric Filter Clinic, Child Welfare Clinic, Medical wards, neurosurgical ward.

The hospital has about 1,600 nurses. The pediatric department has about 255 nurses. The hospital hosts the university of Nairobi medical school and there are other students from various training institutions who come for their training and experience in the hospital.

APPENDIX: J

Table 6 FREQUENCY TABLE FOR NURSE IN-CHARGES'S RESPONSE

QUESTION						TOTAL
Presence of nursing care documenting policy	Response	Yes	No			7
	count	100%	0%			
	%	100%	0%			100.0%
Documenting tool the policy supports	Response	Nursing cardex	Computer based	Care plans	Report card	7
	count					
	%	42.9%	28.6%	28.6%	0%	100.0%
In-charge's support for the existing policy	Response	Yes	No			7
	count	5	2			
	%	71.4%	28.6%			100.0%
Current Tool used by nurses	Response	Care plans	Cardex	Report card	Piece of paper	
	Count	0	7	0	0	7
	%	0%	100.0%	0%	0%	100.0%
Extent of care plan support by in-charge	Response	Very strongly	Strongly	To some degree	Not at all	
	Count	4	2	0	1	7
	%	57.1%	28.6%	0%	14.3%	100.0%
If in-charge nurses gives incentives to nurses	Response	Yes	No			7
	Count	1	6			
	%	14.3%	85.7%			100.0%
Type of Incentives given	Response	Recommending letter	Some time off	Other incentive		
	Count	0	0	7		7
	%	0%	0%	100.0%		100.0%
Continued education on care plan on care plans attendance	Response	Once weekly	Once every 3 months	Monthly	Irregularly	
	Count	4	0	0	3	7
	%	57.1%	0%	0%	42.9%	100.0%
Level of nursing staff	Response	Very adequate	Adequate	Fairly adequate	Inadequate	
	Count	0	2	2	3	7
	%	0%	28.6%	28.6%	42.9%	100.0%
If staffing level affect care plans use	Response	Yes	No			
	Count	6	1			7
	%	85.7%	14.3%			100.0%
The nursing modality practiced in the ward	Response	Primary nursing	Team nursing	Mixture of modalities		
	Count	3	1	3		7
	%	42.9%	14.3%	42.9%		100.0%
If modality practiced favors nursing care plan use	Response	Yes	No			
	Count	5	2			7
	%	71.4%	28.6%			100.0%