



**PROVIDER RELATED FACTORS ON UTILIZATION OF NURSING CARE PLAN IN
LODWAR COUNTY REFERRAL HOSPITAL**

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ABSTRACT

Good health service cares are those which deliver effective, safe, quality, personal and non-personal health interventions efficiently and successfully. Lack of information, inadequate resources and staff is an impediment to implementation of nursing care plans. This study investigated the effect of provider related factors on utilization of nursing care plan in Lodwar county referral hospital. Cross-section design was adopted. The study took place in Lodwar county referral hospital. The study population comprised 120 nurses and students nurses working in Lodwar county and referral hospital during the period of study which took place between January and February 2017. A sample size of 48 respondents was used. The data was collected in all admitting wards including paediatric, maternity, male and female wards (surgical and medical). This study is expected to provide the challenges and opportunities in utilization of nursing care plans for service delivery at Lodwar county referral hospital. Holding other factors constant, a unit increase in provider related factors would lead to 0.541 ($p=.035$) increase in utilization of nursing care plans. Correlation coefficient ranges from -1.00 to +1.00.

KEY WORDS: Provider Related Factors, Nursing Care Plan.

INTRODUCTION

This study was anchored on the pillar of service delivery. Good health service care are those which deliver effective, safe, quality, personal and non-personal health interventions to those that require them, when and where needed, with minimum waste of resources (WHO, 2007). Kenya's national development agenda is elaborated in the Kenya Vision 2030 document where one of the three main objectives of the health sector is strengthening healthcare service delivery. The government plans to employ e-health strategy and level one service to advance service delivery (Republic of Kenya, 2011). Lodwar County presents a good case study as it will be possible to investigate the strategies that are used for service delivery where no known efforts or little has been done to determine the quality of service delivery in these areas of Kenya. The findings will be explicit to Lodwar and may be replicated in other county referral hospitals. The study will strive to determine the quality of service delivery in Lodwar county referral hospital and dissemination of important information that would help health facilities in diagnosis, management and planning. This consequently necessitates the importance of a guide delegating nursing duties that are also integrated and that would make planning possible. Nurse care planning provides a road map that guide all who is involved with a patient care and could be a better way to ensuring improved service delivery (Joint Resource Commission, 2005).

PROBLEM STATEMENT

There is a challenge to coordinated care being employed to play a role in organizing patient care and improve service delivery in Kenya. Designing care plans that are patient focused but also realize the benefits of standardization in terms of more precise, precise, and up-to-date information transfer among all members of different departments.

OBJECTIVE OF THE STUDY

The main objective of the study is to establish the effect of provider related factors on utilization of nursing care plan in Lodwar county referral hospital.

RESEARCH QUESTION

What is the effect of provider related factors on utilization of nursing care plan in Lodwar county referral hospital?

LITRATURE REVIEW

Provider related factors for utilization of Nursing Care Plan

The key factors that motivated the nurses to implement SNCPs were that they were, and, easy to understand and keep an eye on as well as corresponding to organizational norms. The SNCPs were usually based on clinical experience, though research more frequently formed the basis of the SNCPs at the university hospital. Internal facilitators acted as significant educators, who provided reminders to use the SNCP and feedback to the SNCP users. The patient experience was deliberated not to be valuable in their study. They found that those who claimed that the utilization was successful were generally more positive in all measurable aspects. Clinical pathways (CPs), which are multi professional plans for the care of a specific group of patients, are similar to SNCP. Scientific knowledge of CPs can be used as a valid foundation for the development of SNCPs, (Gardolf, 2009).

The success of nurses' adoption of the care plans was accredited to the fact that they were perceived as clinically driven, more representative of the patient's condition, and there was a sense of local ownership. Smith et.al, (2005), examined the utilization of a computerized care planning and documentation system, using the nursing outcomes classification framework. Data was collected through questionnaires, observations, and chart audits both before and after computer implementation. Post utilization data discovered that the nurses' attitudes toward computers were more negative and charting time was not influenced; however chart audits discovered improvement in the completeness of the nursing record,

RESEARCH METHODOLOGY

Research Design

This study applied a cross-sectional study (also known as across-sectional analysis, transversal study, prevalence study) is a type of observational study that analyzes data collected from a population, or a representative subset, at a specific point in time—that is, cross-sectional data.

Research Variables

The variables for this study were classified as independent and dependent variables. The dependent variable was utilization of nursing care plans whereas the independent variables were provider factors, service factors and institutional factors.

Location of the Study

The study took place in Turkana County in Lodwar county and referral hospital. . Turkana County is 77 kms square with total population of approximately 1.3m (2016). Lodwar county and referral hospital is situated at the head quarter of Turkana County; Lodwar town, which is in Turkana central sub county. It is bordered by other six sub counties including; Turkana north bordering Ethiopia at Kibish , Turkana south bordering West Pokot at Kainuk, Turkana East bordering East Pokot at Kapedo, Samburu at Barogoi, Turkana West bordering Uganda, Loima sub county bordering West Pokot at Loya , Uganda at Lokirama and kibish sub county bordering Ethiopia at kibish .Turkana county has three international borders namely: Southern Sudan at northern region, Ethiopia and Uganda on western region of the county . LCRH is a level four (4) hospital providing: preventive, curative, health Promotive and rehabilitative services to a total of 197,768 population, male, female, and under five, (Sermeus, 2009).

Study Population

The study population comprised 120 nurses inclusive of student nurses working in Lodwar county and referral hospital during the period of study which took place in February 2017. Though, the researcher narrowed down to four (4) in patients departments that had a total of 48 nurses.

Sampling Procedure

The study employed purposive sampling design which involved carrying out the study at one particular point in time. Purposive sampling method might demonstrate to be effective when only limited numbers of people can serve as primary data sources due to the nature of research design and aims and objectives. The study was carried out using descriptive and inferential statistics method. According to Lewis, Saunders & Thornhill, (2012) purposive sampling is one of the most cost-effective and time-effective sampling methods available, Purposive sampling may be the only suitable method available if there are only limited number of primary data sources which can contribute to the study. This sampling technique can be effective in exploring anthropological situations where the discovery of meaning can benefit from an intuitive approach.

Kothari (1990) defines sampling as the selection of part of an aggregate or entirety on the basis of which a judgment of inference about the aggregate or totality is made. It is the process of drawing samples that would be a representative of the population of the study. Its objective is to secure a sample which subject to limitations of size to produce the characteristics of the population as closely as possible. Stratified random sampling procedure will be used to select a sample that represented the whole population since the sample population is heterogeneous as illustrated in table 3.1 below.

Table 3.1 Department/Staff of Study

Department	Population
Pediatric	10

Maternity	14
Male ward	15
Female ward	9
Total	48

Source: Author: 2017

Data Analysis and Presentation

The descriptive analyses such as frequencies, percentages and tables were used to analyze numerical data whose results presented in tables, pie charts, columns and bar graphs. The correlation coefficient and Pearson correlation coefficient was used for inferential statistical procedures.

RESULTS

Provider Related Factors

The study had to establish whether provider related factors affects utilization of nursing care plan.

Use of nursing care plan

The study had to establish whether the respondents use nursing care plan in the ward. The results were represented in figure 4.1 below.

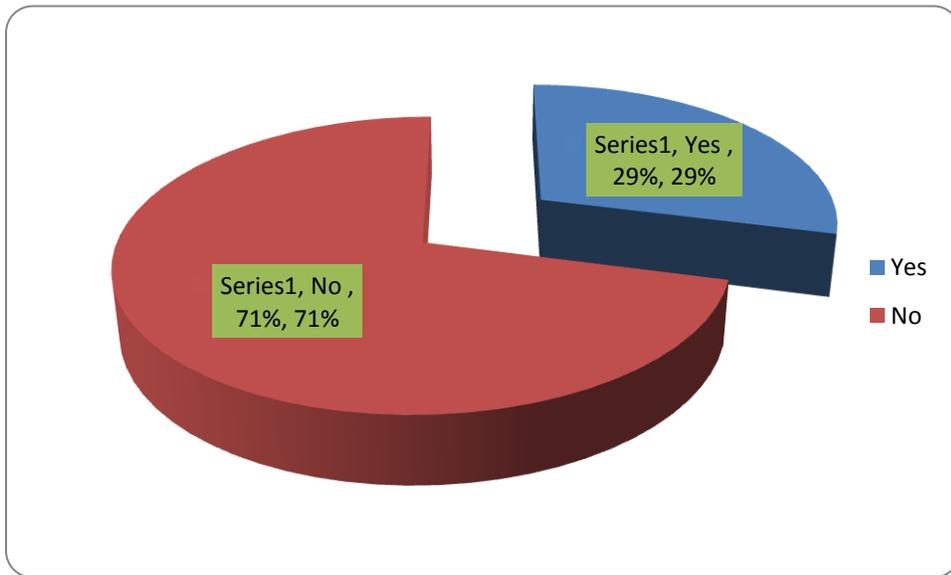


Figure 4.1 Use of nursing care plan

The results indicate that 25(71%) disagreed while 10(29%) agreed that there was use of nursing care plan in the ward.

Table 4.1 Use of nursing care plan

	Freq.	%
Yes	10	29
No	25	71
Total	35	100

It is a clear indication that majority of the use of nursing care plan in the ward was marginal as supported by the majority of 25(71%). The researcher had to establish why the utilization of nursing care plan in the ward was minimal.

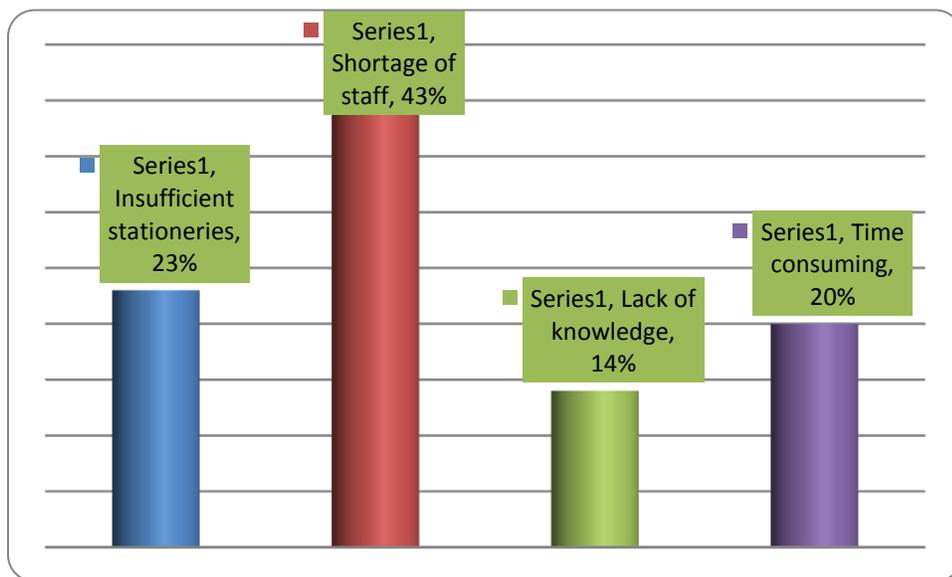


Figure 4.2 Reasons for not using the nursing care

Among 25(71%) of the respondents who had reported that they were not using the nursing care plan, only 5(14%) of the respondents lacked knowledge on the use of the plan. Reasons such as shortage of staff to implement the nursing care plan and attend to the large number of patients who visited the facility was the major reason according to 15(43 %) of respondents, 8(23%) reported insufficient stationeries and 7(20%) said that it was time consuming. Table 4.4 below illustrates this analysis in a table format.

Table 4.2 Reasons for not using the nursing care

	Freq.	%
Insufficient stationeries	8	23
Shortage of staff	15	43
Lack of knowledge	5	14
Time consuming	7	20
Total	35	100

The main reason for not using the nursing care plan was the large number patients who visited the facility according to 15(43 %). This was directly linked to shortage of staff supposed to take care of the overwhelming number of patients. These findings were related to Carpenito, (2000) who posits that the ration of nurses to patient is a matter of major concern because of the effects

it can have on patient safety and quality of care. Nursing-sensitive outcomes are one indicator of quality of care and may be defined as "variable patient or family caregiver state, condition, or perception responsive to nursing intervention.

Evaluation of care plan

The study had to find out who evaluates the care plan. The results are recorded in figure 4.6 below.

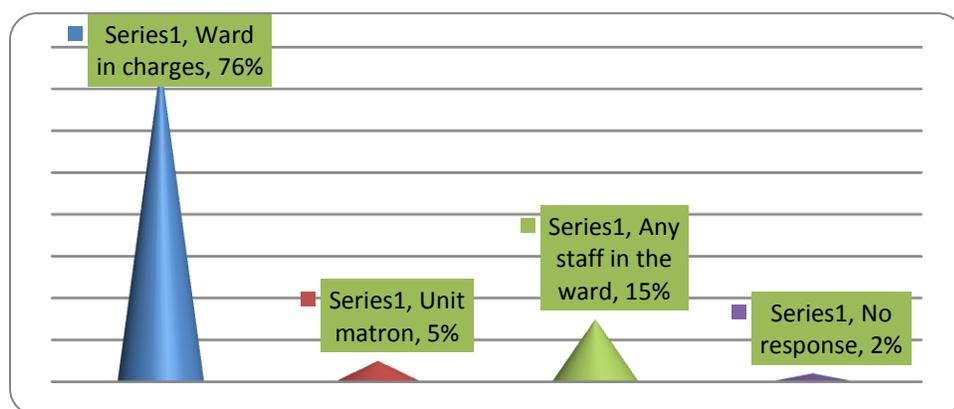


Figure 4.6 Evaluation of care plan

On reporting on who evaluates the nursing care plan 29(76.3%) said it was the ward in charges who are responsible in evaluation of the care plan while 6(15.8%) gave a response that any staff in the ward could evaluate the care plan and 2 (5.3%) selected the unit matron .1 (2.6%) gave no response in relation to the question. These data is presented in the table below.

Table 4.6: Evaluation of care plan

Evaluation of care plan	Freq.	%
Ward in charge	26	76
Unit matron	2	5
Any staff in the ward	6	15
No response	1	2
Total	35	100.0

It is evident from the study above that evaluation of the nursing care plan 29(76.3%) said it was the ward in charges that are responsible of doing it. The findings were in line with Smith *et.al*,

(2005), that evaluation is done primarily by ward in charges to determine whether a client is progressing—that is, experiencing an improvement in health status. Evaluation is not an end to the nursing process, but rather an ongoing mechanism that assures quality interventions. Effective evaluation is done occasionally, not just prior to termination of care. Smith *et.al*, (2005) further notes that evaluation is closely related to each of the other stages of the nursing process. The plan of care might be modified during any phase of the nursing process when the need to do so is determined through evaluation. Client goals and expected outcomes offer the criteria for evaluation of care.

Table 4.8: Who uses care plan

Who uses care plan	Freq.	%
Nurses	28	80
Doctors	7	20
Certain medical health workers	0	0
Anybody working in the hospital	0	0
TOTAL	35	100

It is obvious that nurses utilized the nursing care plan as supported by 28 (80%) of the respondents reported that nurses are the once who use the nursing care plan. In reference to Tourangeau, et al., (2005) activities to assure the adequacy and performance of hospital nursing, improve quality, and achieve effective control of hospital costs need to be harmonized. Nurses are critical to the delivery of high-quality and efficient care. A growing body of evidence demonstrates nursing's impact on the provision of care that is safe, effective, patient-centered, timely, efficient, and equitable. The sufficiency of nursing staffing and proportion of registered nurses is inversely related to the death rate of acute medical patients within a month of hospital admission.

Nurses opinion on use of nursing care plan

The study had to find out the nurses opinion on use of nursing care plan. The results are recorded in table 4.9 below.

Table 4.9 Nurses opinion on use of nursing care plan

Statement	SA	A	D	SD	St. Dev.
	N (%)	N (%)	N (%)	N (%)	
Time Consuming	25, (71)	5, (14)	2, (6)	3, (9)	.5421
Adherence to nursing procedures ,policies and protocols results to improved nursing care plan	20, (57)	15(43)	0	0	.5451
The higher the level of nursing education ,the more positive the nurses attitudes towards patients care	9(26)	19, (54)	4, (11)	3, (9)	.5744
Nurses who had experience with patients care had more positive attitudes towards nursing care planning than those without	15, (44)	17, (47)	3, (9)	0	.6875
Knowledge, enabling and reinforcing factors qualifies nursing care and its relation with patients	15, (43)	14, (40)	4, (11)	2, (6)	.3454

In the analysis of the nurses opinion on use of nursing care plan; most 25(71%) of the nurses strongly agreed that it was time consuming. When asked their opinion on the adherence to nursing procedures ,policies and protocols results to improved nursing care planning 20(57%) strongly agreed while 15 (43%) agreed with it. On the other hand, 19(54%) of the respondents agreed that the higher the level of education, the more positive the nurses attitudes towards patient care while 3(9%) strongly disagreed.

Nurses who had experience with patients care had more positive attitudes towards nursing care planning than those without was agreed by 19(50%) of the respondents.15(43%) respondents agreed that Knowledge, enabling and reinforcing factors qualifies nursing care and relation with the patient. These findings were in line with Smith et.al, (2005) that the success of nurses' adoption of the care plans was attributed to the fact that they were perceived as clinically driven, more representative of the patient's condition, and there was a sense of local ownership. Smith et.al, (2005), investigated the utilization of a computerized care planning and documentation

system, using the nursing outcomes classification framework. Data was collected through questionnaires, observations, and chart audits both before and after computer implementation. Post utilization data discovered that the nurses' attitudes toward computers were more negative and charting time was not influenced; however chart audits revealed improvement in the completeness of the nursing record, (Smith et.al, 2005).

Regression Analysis

The study sought to establish the utilization of nursing care plans for service delivery at Lodwar county referral hospital. These factors include: provider related factors, service related factors and institutional related factors. The regression model was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Whereby Y represent the utilization of nursing care plans, X_1 is provider related factors, X_2 is service related factors, X_3 is institutional related factors.

Table 4.10: Regression Coefficients

Model	Un standardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	3.554	.415		8.545	.045
Provider related factors	.531	.154	.656	5.574	.035

a. Dependent Variable: Utilization of nursing care plans

The following regression result was obtained:

$$Y = 3.554 + 0.531X_1 + 0.624X_2 + 0.138X_3 \quad P=0.039^a$$

From the model, when other factors (provider related factors, service related factors and institutional related factors) are at zero, the utilization of nursing care plans will be 3.554. Holding other factors constant, a unit increase in provider related factors would lead to 0.541 (p=.035) increase in utilization of nursing care plans.

However, holding other factors constant, a unit increase in service related factors would lead to a 0.644 ($p=0.049$) increase in utilization of nursing care plans. The table above also shows that holding other factors constant, a unit increase in institutional related factors would lead to a 0.148 ($p=0.038$) increase in utilization of nursing care plans.

These results show that when acting jointly, provider related factors, service related factors and institutional related factors would improve the utilization of nursing care plans.

Correlation analysis

Factors affecting utilization of nursing care plans and Utilization of nursing care plans

Table 4.11. Correlation analysis results

	Provider related factors
Provider related factors	1.00 (0.01)

*Notes: p-values are given in parentheses. ***Statistically significant at the 0.01 level; **Statistically significant at the 0.05 level; *Statistically significant at the 0.1 level.*

a. Dependent Variable: Utilization of nursing care plans

Pearson's correlation coefficient test is a basic technique to investigate the relationship between two quantitative continuous variables. The primary use of this test is to measure the strength or degree of linear association between two variables. Correlation coefficient ranges from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation and a value of +1.00 represents a perfect positive correlation. A value of 0.00 represents no correlation between the variables. Positive correlation indicates that both the variables increase or decrease together and

negative correlation indicates that if one variable increases then the other decreases and vice versa. Large correlation indicates stronger relationship between the variables. The statistical significance of the relationship is expressed in the probability level p (for example, significant at $p = .05$). A small p value indicates a more significant relationship between two variables. Correlations provide evidence of association between variables but do not demonstrate causality.

To check if there any co-relation exists between factors affecting utilization of nursing care plans and utilization of nursing care plans, a separate correlation test was done which showed that factors affecting utilization of nursing care plans and utilization of nursing care plans have a very strong positive correlation of +1.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Nurses have ability to increase patient satisfaction and patient safety outcomes by utilizing nursing round interventions which is dedicated to serve to improve patient communication and staff responsiveness. Having helpful management and leadership with organized approach of meeting all requirements for nurses to practice use of nursing care plans to meet patients' needs during their hospital stay , was a key factor for success.

The participants agreed that it was the work of the nurse in charge to plan the care which is monitored by the ward in charge. There is need to initiate nursing audits (assessment of the quality of clinical nursing including patients records review and evaluation) to increase quality of nursing care in LCRH and strengthen ward rounds and meetings.

Recommendations

The study recommends that Nurses should be trained on the importance of care plans and should be encouraged to apply them on day-to-day basis. The study further recommends that activities to assure the adequacy and performance of hospital nursing, improve quality, and achieve

effective control of hospital costs need to be harmonized. The researcher recommends that nurses should provide information about available services, as well as educating clients and family members about how to access services or perform particular care activities themselves.

The study recommends that the institutions should set up more staff and bridge the patient nurse ration. The study further recommends that implementing a new care planning system without sufficient cultural, educational, and organizational support has been identified as leading to problems hence making education intervention necessary. There should be sufficient provision of resources to facilitate smooth implementation of nursing care plans. The study recommends that the sufficiency of nursing staffing and proportion of registered nurses should be inversely related to the patients in the health facility. This requires educational intervention to improve knowledge on utilization of care plan in clinical decision making. There is lack of knowledge on the lower cadre since the Kenya medical training college renders training on the middle and higher levels of nurses, consequently the study recommends that KMTC should train both the lower, middle and higher levels of nurses on nursing care plans to improve competency on both levels.

REFERENCES

- American nurses Association (2000), standards of clinical nursing practice. Kansas City: ANA.
NP-79.20m American nursing association (2013).Framework for Measuring Nurses
'Contributions to Care
- Bahtserani C, Khalaf A, Willman A, Östman M (2008). Developing an instrument for evaluating
Implementation of clinical practice guidelines: a test-retest study.
- Carpenito L J. (2000), Nursing diagnosis – application to clinical practice. 8th ed. Philadelphia
Lippincott
- Coordination.515 Georgia Ave. Suite 400, Silver Spring, MD 2091Dahm M F, Wadensten
B.(2008), Nurses 'experiences of and opinions about using standardized Care plans in
electronic health records – a questionnaire study.J ClinNurs.
- D. Munroe, (1990) "The Influence of Registered Nurse Staffing on the Quality of Nursing Home
Care," *Research in Nursing and Health* 13 263–270; Institute of Medicine

- Dobbins M, Robeson P, Ciliska D, et al.(2009) A description of a knowledge broker as part of a randomized controlled trial evaluating three knowledge translation Strategies. *Implement Sci.*; 4:23.
- E.A Madigan and C.Vander boom (2005), "Home health care nursing research priorities," *Applied Nursing Research*, vol. 18, no.4, pp. 221–225.
- Forsberg A, Edlund K. (2003), *Standardvårdplaner* [Standardized nursing care plan]. Lund: Studentlitteratur [In Swedish].
- Gallagher, R.M. (2009). "Participation of the advanced practice nurse in managed care and Quality initiatives," in Joel, L.A. *Advanced Practice Nursing: Essentials for Role Development*, Second Edition.
- Hunter B, Segrott J. (2008), Re-mapping client journeys and professional identities: A review of the literature on clinical pathways. *Int J Nurs Stud*; 45(4): 608-25.
- Jack Needleman and Susan Hassmiller (2009), *The Role of Nurses In Improving Hospital*
- Jansson, I., Bahtsevani, C., Pilhammar, E., Forsberg, A. (2010), Factors and conditions that Influence the implementation of standardized nursing care plans. *Open Nursing Journal*, 4:25-34
- J, Graham I (1998), toward a comprehensive interdisciplinary model of healthcare research use. *SciCommun.*; 20(2):227-246.
- J. Needleman and S. Hassmiller, (2009), "Impacts on the Learning Community Hospitals of
- L. Cullen and S. Adam (2012), Planning for Implementation of Evidence-Based Practice. Logan
- Matthews JH, Coe TR, Bruflat C, Burnett S, Howard P, Peterson C. (2010). *The patient lock model: a continuum of care. Policy Polite NursPract.*, 11(2), 32-9.
- Mason E. J. (1994) How to write meaningful standards of care. Delmar Publishers. Albany, Model Institute for the Future of Aging Services American Association of Homes and Services for the Aging Medical Patients," *Cancer*, 104(5): 975-984.
- Newhouse RP, Johnson K (2009). A case study in evaluating infrastructure for EBP and Selecting a model. *J Nurs Adm.*; 39(10):409-411
- N. Shariff and E. Potgieter (2012), Extent of East-African Nurse Leaders' Participation in Health
- Rantanen, (2005) Policy Development. Hindawi Publishing Corporation Nursing Research and Practice Quality and Efficiency: Real-World Results ff.28.4.w625) *Health Affairs*, 28, no. Transforming Care at the Bedside," *American Journal of Nursing* Olsson PT, Peterson H,
- Willman A, Gardulf A. (2008) Standardized care plans in Swedish

Susan Reinhard and Robyn Stone (2001), Promoting quality in nursing homes: the wellspring

Stone, P.W., et al. (2007). "Nurse Working Conditions and Patient Safety Outcomes," *Medical Care*, 45(6): 571-578.

Tourangeau, A.E. et al, (2005). "Impact of Hospital Nursing Care on 30-day Mortality for Acute

Turunen Olsson P., Peterson H., Willman A. & Gardulf A. (2009), Standardized care plans in Swedish Health care: Their quality and the extent to which they are used. *Scand J Caring Sci* 23(4) 820-5.

Vanhaecht K, De Witte K, Panelle M, Sermeus W (2009). Do pathways lead to better organized care processes? *J EvalClinPract*; 15(5): 782-8.