A Critical Exploration of Surgical-Oncology Nurse's Perceptions of Factors Involved in Decision Making on Postoperative Wound Management: a Descriptive Survey

Melanie Charalambous,
Cyprus University of Technology

Dr. Andreas Charalambous
Cyprus University of Technology

ABSTRACT

Aim: To explore the Cypriots surgical-oncology nurse's perceptions on postoperative wound management and to identify factors involved in decision-making on this topic. The risk factors that influence the quality of wound management were also explored.

Methods and design: A survey design was employed in combination with semi-structured interviews that was undertaken between January-February 2009. A questionnaire was designed and distributed to all surgical nurses of seven surgical wards in a Cyprus Hospital (132 nurses). Seven nurses were randomly selected and interviewed. The completed questionnaires were coded and analyzed with the SPSS program. The interviews were transcribed verbatim and analyzed manually with the use of thematic analysis.

Results: The absence of nurse's up-to-date knowledge and the absence of wound care guidelines appear to negative influence the postoperative wound care decision-making. Furthermore, the influencing role of the doctors in deciding how to manage postoperative wounds is one of the factors that nurses identified as a negative influence to their autonomy. Workload was identified as a major factor that influences the quality of postoperative wound care and maximizes the occupational risks in nurse's area of practice.

The nurses have influences which hindered them to make decision on postoperative wound management and the findings are consistent with the relevant literature. The findings can become a useful tool for policy makers and hospital administrators in order to find ways to improve postoperative wound care decision-making.

Key words: decision-making, postoperative wound management, surgical-oncology nurses.

Introduction

Decision-making is a complex, cognitive process often defined as choosing a particular course of action (Marquis & Huston, 2002). Because wound care decisions may have far-reaching consequences, problem solving and decision-making on this topic must be of high quality on postoperative wound care. The strengths of complex multidisciplinary teams for service users may be realized if the processes of decision-making are respected.

In the last decades many efforts have been made to establish an evidence based approach to the therapy of cancer patients, combining the surgery and postoperative wound care. The appropriate postoperative wound management can significantly decrease cancer patient's morbidity and mortality including early and late complications. The researchers decided to focus on cancer patients due to the fact that these patients consist of a group with special needs postoperatively. In the process of decision-making in relation to postoperative wound management for cancer patients', surgeons and surgical nurses are both involved with the role of the nurses' focused in clinical practice. For the purpose of this study only the nurses' views of decision-making will be explored. Nurses are experienced health care professionals on wound management and it is acknowledged that their perceptions are sometimes unattended.

Nurses need to make decisions on postoperative wound care in their daily practice but there are some factors that influence these decisions in the Cypriot clinical settings. One important factor that it is often acknowledged in casual discussions among nurses in Cyprus in relation to wound management decision-making is nurses' autonomy. Furthermore, the researchers' personal experience also point to a limited nurse's autonomy in the clinical practice and issues regarding this topic have not been previously

addressed empirically or systematically in Cyprus.

The role of the medical staff in the decision-making process on wound management is also a factor which contributes to the nurses' limited autonomy compared to nurses working in other European countries. Furthermore, factors such as workload, absence of adequate and continual knowledge, absence of special equipment are some other important factors that are perceived by surgical-oncology nurses as negatively influencing the post-operative wound care they provide to cancer patients.

Identifying the nurse's perceptions of factors involve in decision-making on wound management for cancer patients and finding out the guidelines they use in their daily practice in clinical settings would be valuable and important for the promotion of quality nursing care, the development of nursing practice and the improvement of patients' health.

Literature Review

Successful nursing care of surgical wounds is dependent on multiple factors. These include the nurse's knowledge and understanding of normal wound healing, physiology, the type of surgery performed the method of wound closure, the wound care techniques and wound care products in order to make an informed decision on wound management (Vuolo, 2006). Using this knowledge, surgical-oncology nurses can provide a systematic and holistic patient assessment and consider any potential wound related complications.

Another factor that may influence nurse's knowledge and continual education is the availability of study time. Research shows that study time was reduced due to the increased workload which in turn limited access to trained staff (Russel and Reynolds, 2001). Nurses have a pivotal role in wound management and dressings selection and should aim to keep up to date in this dynamic specialty (Murphy, 2006). Various researchers have attempted to measure nurse's knowledge of wound healing and the selection of dressings (Morgan, 1999, Courtenay, 2000, Collier, 1999) and they found that there is a gap between theory and practice and a lack of in- depth knowledge among nurses who seem to base their practice on tradition. In any case, lack of basic wound management knowledge can lead to wound mismanagement, causing an unnecessary and costly drain on healthcare resources (Bedell et al, 2003, Glover, 2001).

Some studies aimed to measure how nurses rated their knowledge or confidence in wound care. Vowden and Vowden, (2001), state that nurse's confidence in their ability to undertake appropriate wound management is affected by their power of knowledge. A study by Lamond and Farnell (1998), suggests that it is not only the knowledge that nurses have but how they apply that knowledge in practice when making decisions. The same study indicated that specific education in wound care would effects the decisions made with regard to the treatment of wounds, allowing for more appropriate and effective management. Another study which examined the effects of introducing a specialist certified wound care nurse into a team of community nurses to provide education and training and set up protocols, led to improved quality of care, minimized risk, increase efficiency, and productivity, cost savings and improved patient satisfaction (Bedell et al, 2003).

A growing body of literature (Borges and Savickas, 2002, Carol, 2004, Keast et al, 2004), stresses that a major topic that surgical nurses have to consider is the wound care techniques. An aseptic technique is required for various postoperative wound care procedures, and nurses will perform the same technique differently according to the different ways in which they may have been trained. The clean- versus-sterile technique debate has been waged among clinicians for many years and remains till today without a consensus of opinion. There is evidence in literature for a move towards a clean technique especially in chronic wounds (Gilmour, 1999, Williams, 1999, Michalopoulos and Sparos, 2003).

The literature search revealed that the practice of aseptic technique tends to be based on ritualistic observance rather than scientific evidence (Aziz, 2009). Despite the lack of specific evidence based research about the influence of sterile versus non sterile, nurses are traditionally taught to use sterile than non sterile techniques when caring for surgical wounds. The risks of these two adverse outcomes of post operative nursing care require further and up dated evidence (Rosswurm, 1999). Hallet (2000) identified that many hospitals adopt a number of very different approaches for the performance of aseptic technique, depending on where and how nurses were trained and this can be confusing for the practitioners and it may cause problems to the nurses as well as increasing the risk of postoperative wound infection.

With the exception of the techniques that nurse's use in their daily practice regarding postoperative wound care, there is another aspect that surgical-oncology nurses need to take into consideration that of the appropriate dressing. There has, over the past decade, been a large increase in the types of wound dressings available for use and it became a complex procedure to choose the appropriate dressing for each type of wound (Gupta et al, 2002). As discussed earlier, the nurses need to have good knowledge of the types of dressings available, the properties of individual dressings a sound understanding of wound healing and other aspects in order to make an informed decision on wound management (O' Brien et al, 2000, Bale et al, 2001, Lohman et al, 2004)

In daily wound care, doctors and nurses face a wide variety of dressing materials when treating patients with acute or chronic wounds such as cancer patients. The different choices of doctors and nurses make regarding wound dressing materials are generally based on personal preferences, most of the time which sometimes can be conflicting. The literature review supported that there can be disagreements or conflicts between doctors and nurses especially regarding patients with slowly healing wounds or wounds healing by secondary intention (Baranoski, 1999, Bux & Malhi, 1996).

With all the contradiction, conflicts and differing perceptions on the matter of decision-making on wound management it would be highly important and interesting to explore the surgical nurses' perceptions of factors involved in decision-making in postoperative wound management. As no research on this subject has been carried out before in Cyprus the findings of this project will be valuable for the nurses, nurse educators and policy makers.

Methology

Research approach- Methodological Triangulation

Themes regarding surgical nurse's perceptions on wound management during wound care demand a descriptive and detailed work and well organized data collection techniques in order to achieve confidence to the results and increased generalizability.

A combination of qualitative and quantitative approaches was applied in this study. Through this combination it succeeded statistical generalizability to the research findings and it facilitated interpretation. A questionnaire survey was developed to measure ways of postoperative wound care. Interviews were used in order to investigate nurses' perceptions in depth, regarding this topic. Researchers decided to use face to face semi-structured interviews before the questionnaires, and the questions derived from the literature review and the study's research questions. Therefore, in order to follow up interesting responses and investigated underlying motives which they have the potential of providing valuable and illuminating information they chose interviewing as a data collection technique.

The designing of the questionnaire was done after the analysis of the interviews and its questions derived from the interview findings, literature review and research objectives. Both interviews and questionnaires were piloted before the research undertaking. This was done as to minimize problems of understanding and to assure that the data were the anticipated ones.

As the authors aimed to carry out a representative sample of a large population, they have chosen this method which has the main advantage of easy undertaking the data collection. Further, as the research question of this study aimed to identify the participants' views and perceptions about the decision-making on postoperative wound care, a descriptive survey was the appropriate approach for this project.

Sample selection and data analysis.

The sample was retrieved from a major general hospital. Nurses who worked at surgical departments including general surgical-oncology, urology, orthopedic, neurosurgical and angiothoracic ward. The decision to use the specific population was based on the fact that there is an increased number of cancer patients been treated post-operatively in these wards.

The nurses varied according to their position which consisted of staff nurses and assistant nurses (axillaries). One of the main criteria set by the researchers for selecting the sample was the active involvement of the nurse in wound management. Based on this criterion, ward managers were excluded from the study due to their lack of active participation in wound caring. The total number of staff nurses was 140 and the total number of assistant nurses was 10. From the 150 nurses, 18 of them were excluded (1 nurse from the interview piloting, 7 interviewees and 10 nurses from the questionnaire piloting). Therefore, the population was reduced to 132.

Due to the small size of the population it was decided to use a census sampling for the survey data collection. This decision also served to achieve the best representative selection and generalizability.

The sample for the interviews was consisted of seven nurses randomly selected, (the number 13 from the hierarchical staff list) six staff nurses and one assistant nurse from the participants wards. Each ward was represented in the sample with one participant.

Thematic analysis was used in the present study. In terms of this study the qualitative data were analyzed based on the following six phases as these were described by Braun (2005):

- familiarizing with the data
- generating initial codes
- searching for themes
- reviewing themes
- defining and naming the themes
- producing the report.

The SPSS (v.10) statistical package was used to analyze the quantitative data deriving from the questionnaires. The coding process of the questionnaire included the numbering replacement of the questions for the purpose of analysis.

A total of 109 questionnaires were returned after two weeks notice (88% response rate). Two of them were found to be incorrectly answered so they were considered invalid. For this reason analysis included a total of 107 questionnaires. A reference number was assigned to each questionnaire in order to allow easy access for each one in case of cross checking. During the checking, coding and setting up the data phases, the data were introduced in the SPSS software for analysis.

Ethical Considerations

Anonymity and confidentiality were guaranteed in the reporting of all results and informants were assured that the raw data would not be shared with anyone except the researchers. The informants reserved the right to withdraw their consent to participate at any time without repercussions. The study was reviewed and approved by the Middlesex University - Health Studies Ethics Sub-Committee (HSESC) and the Cyprus Ministry of Health.

FINDINGS AND DISCUSSION

Demographic characteristics

Most of the respondents were between 20-30 years and this is a proof that there are newly-qualified nurses in the certain hospital. Having more young nurses (55%) of the total of the response rate, it is expected that these nurses have up-to-date knowledge in postoperative wound management (due to their recent training). On the other hand, they have less experience than the older nurses. Twenty-three of the participants were male and 84 female. The education of the participants also varied from diploma to Masters Degree (Table 1). The participants came from a variety of surgical wards including surgical-oncology, urology and neurosurgical wards (Table 2).

The majority of the surgical nurses (98.1%) agreed that wound assessment is a part of their daily nursing assessment prior to wound care and only a small percentage of 1.9% disagreed. These findings appear consistent with the relative literature (Falangan, 2003, Bjork & Kirkevold, 2000, Maylor, 2003). Surprisingly, these findings were not consistent with those expressed in the interviews as the seven colleagues disagreed with the opinion that wound assessment is a part of their daily nursing assessment, an aspect which is also supported by the literature (Malagramm, 1999). Only one nurse (N/3-female nurse-age 33) agreed. According to the participants, ***"I only perform wound assessment during the morning shift, which is the time of the day that most if not all the wound caring takes place" (N/7 –female staff nurse - age 50), "I do not see the reason why to do any wound assessment in the afternoon shift if I am not going to care for the wound, it is not part of our routine" (N/4 –female nurse-age 48).*** Some participant also expressed the view that in their ward they do wound assessment when their ward manager recommends it. A female (staff) nurse commented that ***"Doing wound caring is not a routine nursing procedure in this ward for patients with cancer, what usually happens is that the ward manager provides instructions to the nurses on when or how to do this".*** Finally, a participant commented that **"wound assessing takes place only during the first 48 hours post-operatively, after this period we usually use the initial assessment to carry out the wound caring" (N/1 –male staff nurse - age 30).**

These findings point out that there is not a common policy (or guidelines) on when or how frequently to perform wound assessment between the different surgical-oncology departments. In the light of this lack or guidelines nurses choose to do wound assessment at different times and points during the patient's post-operative period. The decisions appear to be made based on a needs assessment and according to the routine that each has chosen to implement for their patients.

However, these findings seem contradicting with the results of one other question which referred to the knowledge of the participants about wound dressing materials and the use of them. In this question it looks that surgical nurses are unaware of specific kinds of wound dressings and particular they are familiar with the dressings that they use in their every day practice, as the gauze dressings. The 74.8% of the respondents agreed that the most familiar wound care material of them was gauze dressing and 99.1% agreed that they use it in their daily practice. Gauze is a traditional dressing for the worldwide clinical settings but it isn't always the better choice for wound management. Basically, is the most cheap to buy and easy to be used in a wound care procedures. But, the actual price' of a dressing, it is not the buying price but the cost effectiveness of it, which it will promote the well being of the patient in a way that will help him to overcome his illness earlier. Furthermore, most of the comparative studies related to gauze dressings have been shown that gauze dressings are not conducive to wound healing (Hoekstra et al, 2002), not cost effective (Moore and Foster, 2000) and uncomfortable for the patient when it comes to changing the dressing (Chang,1998).

The main consideration of the nurses during a wound dressing is the prevention of the infection's spread. These findings are very encouraging. Specifically, 88% of the participants considered that the main consideration of them is the prevention of infection's spread and this can be viewed as a very important issue for this study. Surgical nurses found to be very sensitive in preventing wound infections as they try to minimize the rates of post-operatives infections in cancer patients. Further, this conclusion is confirmed from the results of another question which asked the participants to state if they use or not all the precautions that required preventing risk on wound management. A sample of 86.3% agreed that they use all the precautions required to prevent risk on wound management.

The shift of emphasis should be turned now on the surgical nurse's knowledge on wound management. A large sample of 72% of the nurses agreed that they received sufficient education during their basic nursing education program and 28% disagreed. The 78% of the respondents that answered positively were between 20-30 years. In Cyprus, the basic nursing education program is the same for all the student nurses but there is a good explanation on this difference. The last ten years the program of school of nursing and Midwifery was revised and that's why most of the participants age 20-30 agreed with this question in correlation with lower result of 61% for 46 years old and above. At the same time, these findings stresses the necessity for ongoing education and training programs on postoperative wound management for nurses their qualifications more than 10 years ago.

In a related question relating further education on postoperative wound care, the majority of participants (72.9%), didn't receive further education from their organization and only 27.1% received. Severinsson & Hallberg (1996), suggest that clinical nurse supervisors are responsible for facilitating learning and contributing to an enhanced understanding of the clinical work carried out by the supervisees. Most of the nurses that received education from their organization belong to the group of 20-30 years old and the group of age 46 and over. This is probably attributed to the fact that the ages 46 and above have a senior post in the

clinical settings and have more opportunities to receive further education on postoperative wound care. Regarding the ages 20-30, it is recognized that young nurses are more amenable and exciding to learn and implement in to practice new techniques and materials and this is appreciated from the ward managers.

However, the interview findings of the same questions are conflicting. None of the nurses agreed that they received further education from their organization. Such contradicting results may be attributed to the small sample interviewed and also to the fact that only 27.1% of the respondents agreed with this question. Specifically, five of the interviewees stated that their knowledge on wound management came from basic nursing education (N/1, N/5, N/3, N/6, and N/7), two of them gained their knowledge from other colleagues (N/2, N/7). Participants N/5, N/3, N/6 supported that they gained further knowledge on wound management from their personal interests.

A question regarding surgical nurse's knowledge on wound management found that the only 48.1% of the participants received *further education through their personal initiatives. This was further supported by the interviews as the three of the participants agreed that they received further education from various surgical and wound care conferences. (N/1 male staff nurse-age 30, N/4 - female nurse-age48) and the rests they gained their knowledge from further reading (N/3 female nurse-age 33, N/5-female staff nurse-age 35, N/6 female staff nurse-age 24)*. A possible explanation of these findings is that the absence of nurses personal interesting about further education on wound management may depend on the absence of nurse's autonomy in decision-making, but the workload too which may causes disappointment and complacence for further education. In the literature these findings coincide with Mrayyan, (2004) who assert that, the three important variables that were reported in his study by staff nurses to increase their autonomy were supportive management, education and experience.

The choice of a wound dressing is sometimes a complicated procedure. Nurses were asked to choose and put hierarchically 5 factors that they identified in the interviews as influencing to their decision on what type of wound dressing should they choose. These factors included: (a) doctor's instructions, (b) wound bed characteristics, (c) personal experience, (d) the ward manager's instructions and (e) relevant guidelines. Most of the participants (N=29) answered that doctor's instructions is the most important factor that influences the selection of a wound dressing. These findings are also supported by literature as Mrayyan (2004) support that the three most important factors that were reported to decrease nurses' autonomy were autocratic management, doctors and workload. Clarket et al, (2000), comment that in hierarchical types of hospitals, the decisions are taken by the doctors and not collectively by the team. This is further supported by the interviews findings. Two of the participants said : *I hate to admit this but in most cases I don't have the authority to make a decision how to care for a wound, the nursing staff isn't licensed to make such decisions like wound management'(N/5-female staff nurse-age 35,N/3-female staff nurse-age 33).*

Attention should be placed in a question which asked whether the participant's organization has guidelines on wound dressing procedures. A sample of 55.8% of the participants agreed that in their area of practice guidelines exist and 44.2% of them disagreed. The participants' responses generated skepticism in terms of whether the guidelines adopted by the participant's wards are indeed applied in practice. One other interpretation for these findings may be that the participants confused the word 'guidelines' with the principles that they use in their daily practice which derived from tradition and experience. The literature supports that the use of guidelines and the development of risk-assessment protocols, encompass safety issues for both the professional practitioner and patient (Bree-Williams and Waterman, 1996, Ford and Kohler et al, 2001, Michalopoulos and Sparos, 2003).

In a related question nurses were asked whether they use in their daily practice guidelines that they learned during their nursing training. Results showed that 86.5% of the participants use such guidelines for wound dressings and dressing techniques and 13.5% answered negatively. Respondents, who answered negatively in this question, to choose one of the following factors that influence their decision not to follow the guidelines: workload, absence of materials, the ward manager's instructions, and disagreement with relevant guidelines. A percentage of 57.1% of the participants agreed that workload is the most important factor that makes them not to follow these instructions, 28.6% of them choose the absence of materials and 14.3% answered that ward manager's instructions is the most important factor that influence them not to follow the guidelines. Workload and absence of materials were identified through the literature review as the most important factors that nurses confront in their daily practice (Mrayyan, 2004, Berggren & Severinson, 2003) demonstrating the consistency of this study's findings.

One the same topic, participants were asked to hierarchically identify the 6 factors which they believe are important in influence of the quality of wound management. The six factors as these were identified in the interviews included: (a) workload, (b) absence of continual education on wound care, (c) ward manager preferences, (d) co-operation between nurses and patients, (e) absence of wound care equipment and (f) absence of a wound care expert. The first most important factor that was identified was workload which it seems that it ensures the importance of this issue on wound care. These findings were consistent with those retrieved from the interviews findings. An interviewee commended: *'As I said before the pressure of time make us to work incorrectly sometimes). Sometimes I found myself trapped in a shift where I had to care for 6 patients that all require my care, in such a case I found it difficult to balance my time between them, I admit it that sometimes there is not enough time to do everything, or at least the way you want {…}" (N/4-female nurse-age 48).*

An indication of the absence of guidelines on wound care or the reluctance of the nurses to use them in daily practice

came from the finding that 48.6% the participants decided on their own whether to use or not aseptic technique in their practice. Participants were also asked why they chose to use the sterile technique over other techniques. In their majority (68.4%) nurses failed to provide an evidence-based rationale of their choice. Some nurses acknowledged that most of the time aseptic technique was applied not based on an individualized basis but rather on a ritualistic application. This finding is consistent with the relevant literature which revealed that the practice of aseptic technique tends to be based on ritualistic observance rather than scientific evidence (Aziz, 2009). Despite the lack of specific evidence based research about the influence of sterile versus non sterile technique there are evidence in literature for a move towards a clean technique (Gilmour, 1999, Williams, 1999, Michalopoulos and Sparos, 2003) especially in chronic wounds.

It can be said that the general perception of the Nurses concerning ward managers and decision- making is that they use both tradition and experience for their guidance regarding wound management. Inadequate up to date knowledge and evidence based practice that ward managers and doctors may have, can present serious problems in cancer patients and in health care in general. Through this study emerged that doctors play determinative role on wound management. A sample of 73.1% of the participants agreed that the doctors are responsible for wound care decision-making and 26.9% disagreed. These findings support the fact that nurses have limited autonomy which is an important factor that influences their decision-making on wound management. Autonomy has been viewed by others as an important factor in the power imbalanced between nurses and physicians (McParland et al., 2000). These findings point toward the need for actions to be taken on behalf of the doctors to promote nurse's autonomy which is also supported by other studies (Adams et al 1996, McGillis & Donner 1997, Taunton et al, 1997).

Through this research emerged that nurses are unable to make decisions without prior permission from the ward manager or the medical team and this appears to be irrelevant to the clinical setting. Medical decisions were reported to be given higher priority than nurse's decision. This makes nurses be sideliners in their daily practice and work as executive persons in each nursing procedure. The absence of nurses autonomy can causes them be apathetic in their workplace and be unable to handle a difficult situation themselves.

Cancer patients are a group of patients that may confront various post-operative complications due to the fact that their immune system is vulnerable to infections. In surgical-oncology wards the prevention of infections in cancer patients must be one of the first's goals. One question of the questionnaire asked nurses if they use all the precautions required to prevent risk on wound management. The majority of the respondents (86.3%) agreed that they use all the precautions required to prevent risk on wound management for cancer patients and 13.7% disagreed. These findings are different to those of the interviews as only one interviewee (N/1-male staff nurse-age 30) agreed that nurses' use the necessary precautions available to prevent risk on wound management. The other nurses had opposing perceptions: ***' I can say that the 50% of the colleagues use the available precautions to prevent risk' (:N/2-male staff nurse-age 30).*** A female nurse commented that: ***"some nurses inappropriately use the equipment such as sterile gloves, dressing packs even the sharply tools in order to prevent risk on wound management' (N/3-female staff nurse-age 33).*** Other interviewees commented that: ***"I think that the personal protection is the first goal of the most nurses during wound care so there is a risk of wound and cross infection between patients" (N/5-staff nurse-age 35)*** According to another interviewee: ***"some nurses prepare a big trolley with different kinds of sterile and non sterile products and start doing wound changes from one patient to another" (N/6-staff nurse-age 24).*** The nurses who disagreed (13.7%) to the above question were asked to choose one of the following three options, which they negatively influenced their decisions not to follow all the indicative precautions: workload, absence of equipment and consumables and absence of communicative diseases. Most of the participants (13 out of 14 a percent of 92.9%) answered that the workload is the main factor that influences their decision and 7.1% (1 case) answered that absence of communicated diseases is the major factor that influenced their decision not to follow the precautions available on wound management. These findings were also supported by the interviews as one of the interviewee said: ***"The pressure of time and the low staffing levels don't leave us to do the best on certain procedures".(N/4-staff nurse-age 48).*** Finally a participant stated that: ***"the personal protection is the first goal of most nurses during wound care and this appears not to work in favor of the safety of patients during wound caring" (N/5 staff nurse- age 35).***

Conclusions and Recommendations

The findings signify that in surgical-oncology settings in Cyprus, nurses perceive that they do not have the desired autonomy in their daily practice in relation to wound management which confirmed the researchers' early speculations. Factors that influence nurses' decision-making concerning wound management apart from autonomy are found to be: limited or absence of wound dressing knowledge, evidence based information, medical staff role, ward manager dynamism of power and absence of equipment had been identifying by this study.

Overall, this study shows that nurses work without decisions authority, continual training and development in wound care. A major factor which was identified was the workload and its negative consequences on wound management. Wound management is a complex issue and is influenced by many more factors such as nurse's knowledge, ward manager's preferences, doctor's instructions, and nurses-patients' collaboration.

The results of this survey are intended to assist decision makers in identifying key workplace issues concerning

decision-making in wound management, to improve postoperative wound care in clinical settings and to minimize the risk factors involved in the quality of wound care. The findings can be useful to develop strategies that would address and improve the quality of postoperative wound management because it is acknowledged that factors like wound infection may cause a threat to the patient's recovery.

Postoperative wound care requires systematic planning and efforts since the patient's admission to the hospital might last long covering preoperative, intraoperative and postoperative periods. The recommendations for quality wound care should emerge from a discussion with the hospital administrator and the health care services (Ministry of Health). People with such leading posts should be involved in the formulation of these recommendations.

The establishment of guidelines in health care settings is of significance importance. The absence of specific guidelines in postoperative wound care may cause severe complications on the patient's health but also on the whole health care system. As the development of guidelines demands time, a group of expert health care professionals could be organized to work on this issue. Following guidelines, nurses will have more confidence in their daily practice and this fact will minimize the risk factors in their area of practice increasing the quality of nursing care.

A suggestion will be made regarding the establishment of a wound care nurse. As the literature supports the creation of this institution and in most countries this is already established, it is a good reason to be positive estimated by health care administrators.

The nurse's workplace needs to develop a culture through participation, involvement and decision authority. The absence of nurse's autonomy is a factor that influences wound care decision making in Cyprus clinical settings. As the School of Nursing and Midwifery was recently established as a discipline in the Cyprus University of Technology, it is expected to revise the legislation about authorization and the responsibilities of the nurses in general. Participation in lifelong learning programmes should become an integral part of job performance and career development. Up-to-date knowledge regarding postoperative wound care and available dressings through seminars and conferences and evidence based research must be developed.

An effective cooperation between doctors and nurses must be achieved. Common meetings and seminars must be organized in order to give suggestions concerning the undertaking of nursing and medical procedures. This interaction among them will gain appreciation and respectfulness in every wound management decision-making.

Another suggestion for achieving high quality of wound management emerging from the findings is to reduce the workload in clinical settings. This is a persistent problem for health care professionals around the world and its' management has proven to be difficult. Well-organized mechanisms must be established which will help staff to minimize the workload because the pressure of time is a negative factor that influence the quality of nursing care.

Finally, it would be of significant importance if this knowledge regarding postoperative wound care decision-making is extended by further research. Although this study was something new for Cyprus and nursing practice, researchers expect that further research should be undertaken by other health care professionals on the same topic.

REFERENCES

Adams, D. Miller B.K & Beck L. 1996 Professional behaviors of hospital nurses executives and middle managers in 10 Western States. Western Journal of Nursing Research 18: 77-88.

Aziz A.M. 2009. Variations in Aseptic technique and implications for infection control. British Journal of Nursing Volume 18 NO 1.

Bale S, Baker N, Crook H, Rayman G. Marding KG 2001 Exploring the use of an alginate dressing for diabetic foot ulcers.J of wound care 10(3):81-4

Baranoski S. 1999 Wound dressings: challenging decisions. Home Health Nursing. 1999; 17:19-25

Beddel, B. Bradley, M. Pyriales, M. 2003 How a wound resource team saved expenses and improved outcomes. Home Healthcare. Nurs 2003, 21:6, 397-403.

Berggren I. & Severinsson E. (2003) Nurse supervisors' actions in relation to their decision-making style and ethical approach to clinical supervision. Journal of Advanced Nursing 41, 615–622.

Bjork IT & Kirkevold M.(2000) From simplicity to complexity: developing a model of practical skill performance in Nursing.Journal of clinical nursing.9,620-631

Borges, NJ & Savickas, M.L. (2002). Personality and medical choice: a literature review and integration. Journal of Career assessment 10,362-380.

Braun,V. (2005) In search of (better) female sexual pleasure: female genital 'cosmetic' surgery. Sexualities 8, 407-24.

Bree-Williams FJ,Waterman H (1996) An examination of nurses' practices when performing aseptic techniques for wound dressings. J Adv Nurs 23(1): 48–54

Bux, M. Mahi, JS. (1996) Assessing the use of dressings in practice. Journal of wound care 1996; 5:305-88

Carroll, L.(2004). Clinical skills for nurses in medical assessment units. Nursing standard 18, 33-40.

Chang KW, Alsagoff S, Ong KT, Sim PH. 1998 Pressure ulcers-randomized control trial comparing hydrocolloid and saline gauze dressings. Med J Malaysia ;53:428-31.

Clarke, C., Cook,G.,Gertig, P., Gibb, C. & Morrow,M. 2000. Integration of a health and social work team in mental health an evaluation. University of Northumbria at Newcastle: Practice Development Programme.

Collier, M.1999.Acceptable evidence? Journal of wound care.7:8,433.

Courtenay,M. 2000.An overview of the development of nurse prescribing. British Journal of Community Nursing 5:3,122-125.

Flanagan M. 2003. Improving accuracy of wound measurement in clinical practice. Ostomy wound management 49,28-40

Ford D,Koehler S 2001 A creative process for reinforcing aseptic technique practices (research/education). AORN J 73(2): 446–50

Gilmour D 1999 Redefining aseptic technique. J Community Nurs 13(7): 22–6

Glover, D. 2001. Making skilled wound care a political priority. Journal of wound care 10(7):247.

Gupta, S.K., Lee, S., Moseley, L.G. 2002. Postoperative wound blistering: is there a link with dressing usage? Journal of wound care 11:7,271-273.

Hallett, C.E 2000 Infection control in wound care: a study of Fatalism in

community nursing. Journal of Chin Nursing. 9(1):103-9.

Hoekstra MJ, Hermans MH, Richters CD, Dutriex RP. A historical comparison of acute inflammatory responses with a hidrofibre or tulle gauze dressing,Journal of wound care (2002);11:113-117.

Keast, D.H., Bowering, K., Evans, A.W., Mackean GL., Burrows C & D' Souza, L.2004. Measure: a proposed assessment framework for developing best practice recommendations for wound assessment. Wound Repair and Regeneration 12, S1-S17.

Lohmann M, Thomsen Jk, Edmonds ME, Harding KG, Apelqvist J, Gottrup F. (2004).Safety and performance of a new non-adhensive foam dressing for the treatment of diabetic foot ulcers. J of wound care 10 (8):118-20

Marquis B.L. & Huston C.J. 2002. Leadership roles and management functions in Nursing.(4th edn) Philadelphia: Lippincott Williams 7 Wilkins.

Maylor, M. 2003. Problems identified in gaining non-expert consensus for an hypothetical wound assessment form. Journal of clinical Nursing 12, 824-833.

McGillis L. & Donner G.J. 1997 The changing role of hospital nurse managers: a literature review. Canadian Journal of Nursing Administration 10, 14–39.

McParland J., Scott P.A., Arndt M., Dassen T., Gasull M., Lemonidou C., Valmiaki M. & Leino-Kilpi H. 2000 Professional issues, autonomy and clinical practice: identifying areas of concern. British Journal of Nursing 9, 507–513.

Michalopoulos A, Sparos L 2003 Postoperative wound infections. Nurs Stand 17(44): 53–4, 56, 58, 60

Moore, P.J., Foster, L. 2000. Cost benefits of two dressings in the management of surgical wounds. British journal of Nursing 9:1128-32.

Morgan, D. 1999. Wound management products in the drug Tarriff. Pharmaceutical Journal 263:820-825.

Mrayyan, M.T. 2004. Nurses autonomy: Influences of nurse's managers actions. Journal of advanced Nursing 45 (3) 326-536.

Murphy, F.Assessment and management of patients with surgical cavity wounds. Nursing standards (2006) 20(45):57-58,60,62.

O' Brien JF,Grace PA, Burks PE 2000. Prevalence and etiology of leg ulcers in Ireland.Ir J Med Sa 169(2): 110-12

Reynolds, T.M. Russel, L. 2001 Evaluation of a wound dressing trial by different methodologies demonstrates convent wound care evidence is unreliable. British Journal Nursing in Press 2001.

Rosswurm M.A., Larrabee JH. 1999 A model for change evidence practice. Image; 31: 317-322.

Severinsson E. & Hallberg I.-L. 1996 Clinical supervisors' views of their leadership role in the clinical supervision process within nursing care. Journal of Advanced Nursing 24, 151–161.

Taunton R.L., Boyle D.K., Woods C.Q., Hansen H.E. & Bott M.J.1997 Manager leadership and retention of hospital staff nurses.Western Journal of Nursing Research 19, 205–226.

Vowden K.R., Vowden P.2001.Knowledge is power. Journal of wound care 10(40:97

Vuolo, J.C. Assessment and management of surgical wounds in clinical practice. Nursing standards (2006) 20(52): 46-56

Williams C 1999 Wound irrigation techniques: new Steripod normal saline.

Tables

Table 1: Academic Qualifications

Academic Qualifications

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diploma	85<	79.4<	81.7<	81.7<
	Bsc	9<	8.4<	8.7<	90.4<
Master degree		1<	,9<	1,0<	91.3<
	Total	104<	97.2<	100,0<	
Missing	System	3<	2,8<		
Total		107<	100,0		

Table 2: Work Setting

Work Setting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neurosurgical Ward	16	15,0	15,0	15,0
	Angiosurgical Ward	13	12,1	12,1	27,1
	Surgical A	17	15,9	15,9	43,0
	Surgical B	18	16,8	16,8	59,8
	Orthopedic Ward A	14	13,1	13,1	72,9
	Orthopedic Ward B	15	14,0	14,0	86,9
	Urology Ward	14	13,1	13,1	100,0
	Total	107	100,0	100,0	

Appendix A

Interview sample questions

1. Can you tell me about your current role in the hospital?
2. Do you believe that your practice area uses up to date wound care techniques during post operative wound care?
3. When are you doing wound assessment during your daily nursing care?
4. Can you tell me about some of the wound care products you use, and their usefulness of wound management?
5. Where does your knowledge come from, regarding wound management?
6. How do you make decisions about what to use on a particular wound? What do you have to take into consideration?
7. Do you believe that nurses use all of the precautions to prevent risk on wound management?
8. Which factors in your opinion influence the quality of wound management?

Appendix B

Questionnaire

Demographic characteristics of the nurses

•Male ❑ • Female ❑

•Nursing position ❑

•Work setting ❑

•Post qualification experience ❑

•Specialist nursing area of work ❑

•Age 20-30 ❑ 30-40 ❑ over 45 ❑

1.Wound assessment is a part of your daily nursing assessment for your patients before wound care.
True ❑ False ❑

2.You are confident making decisions regarding the appropriate wound dressing for your patients
True ❑ False ❑

3.You received sufficient education on post-operative wound care in your basic nursing education program.
True ❑ False ❑

4.You received further education on post-operative wound care during your career from your organization.
True ❑ False ❑

5.You received further education on post-operative wound care during your career from personal initiative.
True ❑ False ❑

6. The following 5 factors influence the selection of a wound dressing:

A. personal experience ❑

B. doctors instructions ❑

C. wound bed characteristics (dry, draining, clean, necrotic) ❑

D. ward manager instructions ❑

E. relevant guidelines ❑

Identify how important you feel each one is by placing a number against it- for example, if you feel that ward manager instructions are most important, place a number 1 against that item. If you feel that personal experience is the second most important place a number 2 against that item, and so on.

7. Your organization has guidelines on wound dressing procedures including the frequency for dressings changing and for the appropriate choice of dressing.
YES ❑ NO ❑

8.To wear sterile gloves or not for dressing's changes for post -operative wound care it is your decision.
YES ❑ NO ❑

9.To use an aseptic technique or not in a post -operative wound it is your decision.
YES ❑ NO ❑

10. How many dressings' changes (average) are you doing in each shift overall?

• Morning shift ❑

• Evening shift ❑

• Night shift ❑

11. How much time (average) do you spend during a dressing change?
5 minutes ❑ 10 minutes ❑ 15 minutes ❑ 20 minutes ❑

12.What is your main consideration during a wound dressing in order to make the right decision?
- Preventing damage to the surrounding skin. ❑
- Preventing patient pain. ❑
- Preventing the spread of infection. ❑
- Personal safety. ❑
- Other (please specify) ❑

…………………………………………………………

13. Povidone iodine is the most common used to clean acute wounds in your facility.

YES ❑ NO ❑

If a different antiseptic is used please specify

…………………………………………………………

14. Please indicate which of the listed materials are familiar to you relating with the use of them.

Material

1. Film dressings ❑
2. Transparent dressings with pad ❑
3. foams ❑
4. hydrogels ❑
5. Paraffin gauze ❑
6. hydrocolloids ❑
7. Low – adherent dressings ❑
8. Semi permeable dressings ❑
9. Gauze dressings ❑
10. Non transparent dressings with pad ❑

15.Which dressing from the above list you use most in every day wound management procedures? Please indicate the number of it.

……………………………………………………

16. Your organization has enough consumables and materials for your daily dressing procedures.

YES❑ NO ❑ Sometimes ❑

17. Are there any wound care products which you do not have, which you would like to be able to use?

YES ❑ NO ❑

If Yes please specify ………………………………

18. The following 6 factors are important in influence of the quality of wound management:

A.Workload ❑

B.Absence of continual education on wound care ❑

C.Ward manager preferences ❑

D.Co-operation between patients and patients ❑

E.Absence of wound care equipment ❑

F.Absence of a wound care expert ❑

Identify how important you feel each one is by placing a number against it- for example, if you feel that workload is most important, place a number 1 against that item. If you feel that absence of wound care equipment is the second most important place a number 2 against that item, and so on.

19. What is most useful in your opinion to guide a ward manager in decision making on wound management?

A. Tradition ❑

B. Experience ❑

C. Evidence based practice ❑

D. Up to date knowledge ❑

E. All of them ❑

20. In your organization, doctors are responsible for wound care decision making.

YES ❑ NO ❑

If yes:

Are their decisions a dominant factor in deciding the approach to wound care?

Sometimes ❑ Always ❑

Most of the times ❑ Never ❑

21. Do you believe that the doctor's influence can affect your decision making about wound management?

YES ❑ NO ❑

If yes

Do you agree with doctor's decision on wound care?

Yes ❑ Some times ❑

No ❑ Most of the time ❑

22. Do you use the wound dressing guidelines that you learned at school of nursing for your daily practice?

YES ❑ NO ❑

If No

Which of the following factors influence your decision not to follow them?

A. Workload ❑

B. Absence of equipment ❑

C. The ward manager's instructions ❑

D. Disagreement with these guidelines ❑

23.You use all the precautions required to prevent risk on wound management?

True ❑ False ❑

If false,

Which of the following factors influence your decision not to follow the precautions available on wound management?

A.Workload ❑

B. Absence of equipment and consumables ❑

C. Absence of known infectious diseases cases in the ward. ❑

D. Other (please specify). ❑