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E-mail: shelley.schmollgruber@wits.ac.za (Secretary WFCCN)

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FAMILY PRESENCE DURING CARDIOPULMONARY RESUSCITATION: A EUROPEAN PERSPECTIVE OF CRITICAL CARE NURSES- WHERE ARE WE NOW?

John W. Albarran, UK; Paul Fulbrook, Australia; Jos Latour, The Netherlands

One area of professional controversy concerns whether family members should be present when a loved one is undergoing cardiopulmonary resuscitation (CPR). There are many emotional arguments for and against this concept, which are also immersed in ethical, moral and professional debate (Albarran and Stafford 1999). However, research within the critical care arena has been absent. This paper presents data on the similarities and differences arising out of two European studies involving the attitudes and experiences of adult critical care nurses and paediatric/neonatal intensive care nurses in relation to this sphere of practice (Fulbrook et al., 2005, Fulbrook et al 2007a). The presentation will also outline the launch of critical care nursing position statement on *The presence of family members during cardiopulmonary resuscitation* (Fulbrook et al., 2007b) and on-going developments in this field. The conclusion will suggest that critical care nurses need to be proactive and ensure that policies are in-place to support the development of family members being present during CPR.

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HUMIDIFICATION AND AEROSOL THERAPY DURING MECHANICAL VENTILATION

Laura M Alberto, Argentina

The purpose of this presentation is to provide evidences regarding the appropriate method to heat and to humidify inspired gasses in mechanically ventilated patients and to propose the adequate technique for aerosol administration.

During normal breathing upper respiratory tract warms, humidifies and filters inspired gas. Artificial airways avoid this function. So humidification and filtration of gasses must be provided. To know concepts of relative humidity and absolute humidity are important to understand how to intervene properly when providing humidification.

After passing thorough the nasopharynx, inspired gases are 29° to 32 °C at nearly 100% of relative humidity, as the gases approach the carina, gases are 32°C to 34°C and nearly 100% of relative humidity. The point at which the gases reach alveolar conditions (37°C and 100% of relative humidity) is known as the isothermic saturation boundary, after intubation the isothermic saturation boundary does down the bronchial tree. At this level gases are in the optimum condition for alveolar gas exchange (Branson 2001).

There are two methods to provide humidification commonly known as active and passive humidifiers. Some recommendations are necessary to take into account when selecting the method that best meet patient's needs:

- Daily patient assessment of humidification efficacy should be performed (Branson 2001) including evaluation of secretions consistency and tube patency.
- Some passive humidifier devices could be changed weekly (Thomachot et al., 2002; Thiéry et al., 2003) but dead space, airway resistance and moisture output of the device should be taken into account to choose the most efficient device.
- Some evidence suggest significant reduction in incidence of VAP in patients humidified with HMEs during mechanical ventilation for 7 days or longer , but further RCT are necessary to examine the wider application of HME and their extended use (Kola et al., 2005).
- There is no difference in the rate of tube occlusion between devices

but significantly higher level of VAP with heated humidifier. (Bench, 2003; Lacherade et al., 2005).

- Functional, structural and physiological damage can occur when appropriate humidification is not provided.

Inhaled bronchodilators are routinely administered to mechanically ventilated patients to relieve dyspnea and reverse bronchoconstriction. There are two types of aerosol generator, nebulizer and meter dose inhalers. Both generate a mass medium aerodynamic diameter particle between 1 to 3/5 *μm* which is a respirable size particle (Branson, 2001). A lower percentage of the dose reaches the lower respiratory tract in a mechanically ventilated patient than in nonintubated patients. Attention to device selection, administration technique, dosing, and patient-ventilator interface can increase lower respiratory-tract deposition in a mechanically ventilated patient. (Duarte, 2004). Selecting the optimal aerosol-generating device for a mechanically ventilated patient requires consideration of the ease, reliability, efficacy, safety, and cost of administration. With careful attention to administration technique, bronchodilator via metered-dose inhaler or nebulizer can be safe and effective with mechanically ventilated patients (Duarte, 2004).

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STUDY OF THE EFFECT OF SELF CARE BEHAVIOURS ON THE QUALITY OF LIFE IN PATIENTS WITH HEART FAILURE IN MEDICAL CENTERS AFFILIATED TO IRAN AND TEHRAN UNIVERSITIES OF MEDICAL SCIENCES AND HEALTH SERVICES (POSTER)

S Asemi, F Shojaei, AN Yarandi, F Hosseini, Iran

Heart failure,as acommon disabling and fatal disorder impose a great burden on patients suffering from itFinding ways to promote the quality of life of the patient will consequently,diminish her/his problems and in this way nurses are those whom play the most important role.

The objective was to study the effect of self care behaviours on the quality of life of patient with heart failure.

It was a correlational-descriptive study in which questionnairs were used to gather the data.

The research sample,included 250 patients with heart failure,whom where selected by convenience random sampling method.

Based on the findings,there was a statistically meaningful relation between self care behaviours and the quality of life (p=0.00).also,all dimentions of the quality of life were related to self care behaviours,this reveals that whenever self care behaviours are promoted,the quality of life would be more satisfactory.Besides 76.4% of the patients possessed moderate and low self care behaviours level.

Overall,we found that the majority of the sample group possessed undesirable and low level quality of life and self care behaviours.patients with betters quality of life,reckoned that they had had more desirable self care behaviours.so,it is recommended that inorder to improve the quality of life of the patients with heart failure,self care behaviours to be enhanced by teaching and consulting programs.

AN INVESTIGATION INTO THE IMPLEMENTATION OF AN EMERGENCY UNIT TRIAGE SYSTEM IN A SELECTED PRIVATE HOSPITAL

J Augustyn, SP Hattingh, VJ Ehlers, South Africa

Triage assessment of patients on arrival at an emergency unit is an essential function in quality emergency care provision. Critically ill or injured patients are not necessarily obviously identifiable and so triage assists in the process of sorting and prioritising patients according to their level of acuity. Specifically the Cape Triage Score utilised in the study objectively identifies the critically ill/injured as well as those persons who have such potential but who may not be necessarily obviously in urgent need of attention.

This study was performed within an emergency unit that experienced serious problems with the sorting of patients on their arrival. After implementation of the Cape Triage Score, a questionnaire was distributed amongst staff utilising the new triage system. The investigation sought to answer specific questions concerning the triage nurse's roles, competencies required and strengths and weaknesses of the implemented system. The study also suggests guidelines to improve the triage system within the unit.

The triage system was received well by participants. The roles of the triage nurse are multifaceted and extensive competencies are required. The strengths of the implemented triage system outweighed the weaknesses as perceived by the respondents. Guidelines for implementing triage in emergency units are provided.

Triage is not negotiable in emergency medicine and the unit investigated benefited from its inception. The methods and processes of triage though still should be adapted to each unit arrangement as patient flow and staff allocation differs in specific units.

AN INVESTIGATION INTO THE SCOPE OF PRACTICE OF A REGISTERED CRITICAL CARE NURSE IN A PRIVATE HOSPITAL

J Bell, South Africa

The skilled critical care nurse is expected to make independent decisions and take action to meet dynamic patient needs based on her/his knowledge and clinical skill without discounting scope of practice parameters. Practice experience has shown that the critical care nurse is often uncertain about whether these clinical activities are protected by the regulations of the South African Nursing Council.

The aim of this study was to investigate the opinion of registered critical care nurses in the private healthcare sector related to their clinical activities and interpretation of the Scope of Practice (No.R 2598 of 30 November 1984 as amended.).

A non-experimental, exploratory descriptive study was conducted in 19 private hospitals in Cape Town area with a sample of 71 registered critical care nurses. A questionnaire was developed and validated to collect data. Quantitative data was analysed statistically with qualitative data being analysed thematically.

It was found that the legal and professional guidelines in place do provide a foundation for the clinical activities of the critical care nurse in the private hospital sector. It is suggested that it is rather the critical care nurses' interpretation of the scope of practice regulation that limits clinical nursing practice as opposed to the wording of the regulations.

It is recommended that critical care nurses must use the regulations as

a foundation for critical, analytical and reflective practice to meet patient needs rather than as a set of rules to be followed.

CAREER PATHING FOR CLINICAL NURSES IN SOUTH AFRICA

Busie R Bhengu, South Africa

In addition to basic nursing qualifications worldwide, there is opportunity for clinical advancement in the form of Advanced Nurse Practitioner (ANP) and Clinical Nurse Specialist (CNS) and additional qualifications in clinical nursing science governed by R212 of the South African Nursing Council in the South African context.

There is, however, no specific category or career path for these personnel with additional qualifications nor is there a different scope of practice for them in RSA. If they must move up or advance, they need to divert from bedside nursing to health services management, education or migrate. Studies still reveal conceptual disparity, role ambiguity and conflict even in the developed countries confounded by lack of legislative framework and policy (Bamford & Gibson, 1999: 282).

This paper will explore the conceptualization, models, roles, job descriptions of and opportunities for the CNS/ANP worldwide and in South Africa in order to benchmark for South Africa and a possible framework will be suggested.

Both published and unpublished English studies were reviewed 1990-2007. Three-step search strategy for key words contained in the title was done, for example: career pathing, clinical nurse specialist, nurse practitioner. The search was taken further to related keywords and index terms, for example, nurse consultant, nurse mentor. Reference lists and bibliographies of relevant articles are also consulted. Databases such as CINAHL, MEDLINE, PubMed, Cochrane Library, Science Direct, SABINET Online, Expanded Academic Index were and are still being consulted. Unpublished studies, e.g. dissertations, abstract international, reports.

A framework including the job description and further study will be suggested.

PATIENTS TRANSITION BETWEEN INTENSIVE CARE UNITS AND GENERAL WARDS (POSTER)

Busie R Bhengu, South Africa

General systems theories advocate for interface between components of the system including those of the health care system such as the ICUs, Intermediate units and general wards and other institutions/units involved in the referral system. This can be achieved through smooth exchange of information, services and patients in order to meet the primary health care principle of continuity.

The study was conducted in five hospital where 8 nurses and 5 intensivists in charge of ICUs were interviewed. Inclusion criteria were being in charge and having decision making power in ICU management and availability.

Nurses only communicated with each other across units to organize a bed and transport for the patient. They asserted that they were too busy and short staffed.

ICU directors kept patients longer in the ICUs for the following reasons:

- Lack of Intermediate Units (Step Down and High Dependency Units).
- A problem of perception whereby log-term ICU patients were perceived a usual general ward patients
- Sub-optimal staff and equipment in the general wards
- Anecdotal and empirical evidence of re-admissions linked with early ICU discharge
- Anecdotal and empirical evidence of being called to certify death rather than resuscitate

It appears that care of post ICU patients is suboptimal to continue care from ICU. This is ascribed to disparities in the provision of health care resources. Keeping patients longer in ICU has financial and ethical implications. Literature recommends follow-up nurse, improving standard of care in general wards rather than further specialization in SDU and HDU through ICU outreach.

BARRIERS TO ORGAN DONATION

Bernice Budz, Canada

The last decade has seen the waiting lists for human organs and tissues grow to proportions that mean many people on transplant waiting lists will die before an organ becomes available. Transplant organizations around the world have predicted that the current trend will intensify for at least the first 15 years of the 21st century, tripling the so called transplant gap by the year 2015. There have been many attempts to explain and deal with the shortage.

However, the number of organs available for transplantation in Canada continues to decline. Previous research has indicated that donation could be increased by focusing attention on four major barriers. The first barrier is the identification of donors which involves both the health providers and the public. The next sets of barriers are the events that take place in the hospital around the time a family is asked for consent around organ donation. The third deals with the limited resources to care for the donor in the ICU setting. Currently, Canada has no national coordination for a waitlist which can creates delays in communication and impacts timely decision making for successful transplants. Before we can adequately address the issues and concerns raised by the organ shortage, it is important to understand the barriers to organ donation especially those within critical care units. It is hoped that additional information will help with the planning to over come theses obstacles and thus result in an increase in available donor organs.

NURSING DOCUMENTATION IN AN ACCIDENT AND EMERGENCY DEPARTMENT: AN AUDIT

CA Carter, BR Bhengu, L Govender, South Africa

In Accident and Emergency Departments there are often long waiting times and the lack of available hospital beds result in long delays to admission thus the Emergency Department becomes a general ward, inadequate staffing levels compound this situation. Any deterioration in a patient's condition is often undetected. It has been proposed that the Modified Early Warning Scoring System (MEWS), be introduced into the Accident and Emergency Department. Baseline data needed to be established prior to introducing MEWS thus an audit was undertaken.

Files of adult patients admitted to the wards via the Emergency Department in the preceding 24 hours were audited on a random basis over a 5 week period. Information analyzed included waiting times; time to admission; observation intervals; interval from final observations to admission; types and frequency of observations; frequency of nursing entries; night duty was also compared to day duty.

Results revealed that record keeping was poor; observations were inconsistent; there were delays to being seen by medical personnel and delayed consultation with specialty services; night staff appeared to be less compliant with both documentation and observations.

Documentation in the Emergency department is generally of a low standard with observations being done inconsistently and important parameters such as respiration being rarely monitored. Possible causes for these findings include design of documentation; lack of knowledge and insight; patient load and lack of supervision. In-service education

on documentation was initiated. MEWS is now being introduced. A further audit is planned to monitor changes in compliance with nursing documentation

AN INVESTIGATION INTO NURSES' PERCEPTION OF NOISE LEVELS IN THE CORONARY CARE AND NEUROSURGICAL INTENSIVE CARE UNITS AT GROOTE SCHUUR HOSPITAL

Nicki Fouché, South Africa; Mary Mlewa, South Africa

The aim of this study was to investigate nurses' perception of noise levels in two Intensive Care Units (ICU's) at Groote Schuur Hospital. The objective of the study was to examine the effects of noise on caregivers.

The population studied was the nursing staff (all categories) working in the above units. Convenience sampling was utilised and was determined by the willingness of the target group who participated in the study. A qualitative descriptive approach was selected to investigate the nurses' perceptions of the noise levels in the two units. A structured questionnaire was utilised which consisted of open and closed questions. These were distributed to the research participants. Information collected was analysed using a content analysis approach.

The study findings revealed that the causes of noise in the two Intensive Care Units (CCU & NSU) was generated by emergency procedures, staff and visitors talking, patients shouting, ward rounds, and technical equipment. The stressors of noise on the nursing staff were discussed and implications and recommendations for nursing practice, education and further research were considered.

A EUROPEAN SURVEY OF ENTERAL FEEDING PRACTICES IN INTENSIVE CARE

Paul Fulbrook, Australia; Anke Bongers, The Netherlands; John Albarran, UK; Zandrie Hofman, The Netherlands

This paper will present initially the findings of a 20 country European survey of enteral nutrition feeding practices. Data from the survey revealed that although most intensive care units were using feeding protocols, there were many units employing outdated procedures with respect to enteral feeding. A minority of intensive care units was supported by nutritional support teams. However, in these units it was more likely that the patient's nutritional risk would be assessed, and that nutritional requirements would be assessed on a daily basis. The findings from this survey will be used as a basis to compare European practices with current evidence-based guidelines.

CARE BUNDLES IN CRITICAL CARE

Paul Fulbrook, Australia

There are many ways to introduce evidence into a practice setting, for example, through the development of evidence-based protocols and there has been considerable interest in developing clinical guidelines and care pathways as means to improve the quality of patient care. As a way of reducing the gap between research and practice in clinical areas, the concept of what have become known as care bundles, is becoming more widely accepted.

Care bundles provide a method for establishing best clinical practice, which is evidence-based. In theory, care bundles will improve clinical effectiveness. A care bundle or evidence-based practice protocol is a grouping of care elements for a particular symptom, procedure or treatment. What is important about a care bundle is the emphasis on grouping several evidence-based practices. The premise is that several practices, when used in combination or as a cluster, all of the time, have a cumulative effect on the positive outcome of patients. It should be noted, however, that whilst the individual components of a care bundle each has a strong evidence base, there is, as yet, a limited amount of reported evidence that demonstrates that clustering components in this way improves patient outcomes.

The purpose of this paper, in the context of evidence-based practice, is to explain what constitutes a care bundle, describe some of the existing bundles, including some of the evidence that demonstrates their effect, and describe how they can be can be implemented in a critical care practice setting.

DEVELOPMENT OF A NURSE-LED WEANING FROM VENTILATION PROTOCOL

Paul Fulbrook, Australia

There is a growing body of evidence that indicates that patient outcomes can be improved if a protocol is used to guide the process of weaning from mechanical ventilation. However, the literature also concludes that it does not matter which healthcare professional group leads the weaning process, as long as a protocol is used. Available evidence suggests that use of a protocol is more efficient, may reduce duration of mechanical ventilation and length of ICU and hospital stay and is associated with a reduced risk of post-operative complications e.g. chest infection and airway trauma.

This paper describes an evidence-based protocol that was developed for nurses. It comprises of four stages, each of which is described. A weaning algorithm is presented that was developed for use in several ICUs, which can be adapted easily to suit local preferences.

DEVELOPMENT OF A POSITION STATEMENT: AUSTRALIAN COLLEGE OF CRITICAL CARE NURSES

Denise Harris, Australia

It is one or the responsibilities of professional organisations to be proactive in the setting of appropriate standards, to maintain and enhance patient outcomes. One way in which this can be achieved is through the development of practice guidelines and position statements.This paper, after giving a brief overview of the development of the Australian College of Critical Care Nurses, will describe the process undertaken in the development of one of the College's position statements:

- Literature Review: Skill mix, patient outcomes, other position statements/guidelines
- Expert Panel – Workforce Advisory Panel: Draft Position Statement
- Member feedback: Published in Critical Times, ICE open session, consultation with NENA
- Position Statement revised
- Endorsed by National Board

MOOD DISTURBANCE OF CARDIAC TAMPONADE PATIENTS

Yuko Ikematsu, Japan

Cardiac tamponade is a lethal complication associated with a variety of medical and surgical conditions. Nurses play a pivotal role in detecting cardiac tamponade because it often develops in tertiary care settings where nurses closely observe the patients. Changes in mood status in early stages in cardiac tamponade are frequently addressed in nursing and medical textbooks. They are described as anxiety, restlessness, apprehension, or a feeling of "impending doom." This variation of the terminology indicates there is no clear concept of the mood. Based on the

terminology used in the existing textbooks and review articles, the mood is named "dysphoria" with a definition "an unpleasant sensation consisting of anxiety, malaise, and/or a feeling of 'impending doom,' manifesting as restless, agitated, and confused behaviors due to unidentified causes." In order to identify incidence and characteristics of the dysphoria, chart review study was conducted in Japan. Following the study, an interview study is ongoing in the United States in order to explore the nature of the dysphoria. Results of the chart review study and preliminary results of the interview study will be presented, and implication to nursing practice and future directions will be discussed in the session.

CRITICAL REFLECTIVE INQUIRY AS A TOOL TO IMPROVE CRITICAL CARE NURSING PRACTICE

DongOak Debbie Kim, Korea

Nursing Practice involves human beings both as the recipients of nursing care and as the agents of nursing practice, a socially mandated form of human service, and totally individuated and situated activities of nursing agents. Most of critical care nurses are practicing under the organizational settings and delivering the care usually to their clients with group under the organizational constrictions. Each individual clinician frequently experiences and suffers from the time and resource constrictions. It makes their practice easily fall into routinization, and turn their ideal nursing thoughts into mundane routinized practice.

The purpose of this project was to help clinicians to discover exemplary models of practice, remain in a learning mode in their practice, and improve their practice by utilizing the Critical Reflective Inquiry tool.

The nursing practice is composed with three dimensions (scientific, ethical, and aesthetic dimension), and delivered through interacting of two analytical phases (deliberation and enactment phase) under the foundation of two philosophies (philosophy of care and philosophy of therapy). Individual practitioners use and synthesize their private and public knowledge in their practices to promote their client's health. The Critical Reflective Inquiry (CRI) was used to develop the knowledge in nursing practice.

The goals of CRI are self-understanding of the nature of practice, correction & improvement of practice through reflection & critique, and generation of models of exemplary practice. CRI is processed with three phases; descriptive, reflective, and critical phase, and can be done with individual or group process. The guides for the descriptive phase in successful CRI are important to keep the accuracy, truthfulness, completeness of the actions, thoughts, & feelings in their narratives & scripting. The guides for the reflective phase in successful CRI are important to identify the espoused theories, discover the theories-in-use and analyze the knowledge embedded in practice (knowing-in-action), values/ethical standards embedded in practice, and reflective conversation with the situation, reflect regarding action & intentions, and reflect regarding action & outcomes. The guides for the critical phase in successful CRI are to critique regarding appropriateness, value, & success of action, regarding outcomes, regarding knowledge, regarding values, standards, & ethics, regarding authenticity, regarding learning and emancipation.

In conclusion, when a practitioner becomes a researcher into his own practice, he engages in a continuing process of self-education, and when he functions as a researcher-in-practice, the practice itself is a source of renewal. The CRI is an alternative to improve the critical care nursing practice in present and future.

CRITICAL POINTS IN TREATMENT AND TRANSPORTING OF CRITICALLY INJURED PATIENTS (POSTER)

Rudi Kocevar, Irena Bucek Hajdarevic, South Africa

Critical points in treatment of critically injured patients are mostly organisational in their nature and include material equipment, architectonic characteristics, the number of staff available and the number of injured patients.

The success of an intervention, and of further treatment of the injured patients, mostly relies on the first information. Incomplete data can cause an unsuitable evaluation of the nature and location of an event, its emergency level and arrangement of teams necessary for taking suitable steps.

For efficiency we would need a flawless communication between the prehospital unit and the hospital resuscitation team. If the communication fails the latter loses time in order to prepare the equipment, apparatus and instruments, instead of immediately treating the patient.

Upon arrival to the hospital, the injured patient is taken over by the trauma team that continues with the care. The problem lies in the fact that, if the team is already engaged in another emergency operation, it is impossible for the trauma team to be complete.

Upon admittance the team must bear in mind the prescribed manners replacing the apparatus and instruments, by connecting the injured patient to the hospital transportation equipment, conduct measurements and only then remove the equipment from the field. If the patient is moved recklessly, we can only cause additional injuries.

Those patients have to be transported to distant places in order to have additional diagnostics performed. These transportations are urgent, that is why lack of time, many technical instruments and measures can lead to fatal mistakes.

EXPERIENCES OF CRITICAL CARE NURSES IN THE MANAGEMENT OF A LARGE INTENSIVE / CRITICAL CARE UNIT (POSTER)

MC Matlakala, South Africa

As health care changes, demands for intensive care nursing changes continue to grow, thus calling for even larger intensive care units. The tendencies for hospitals in South Africa is to create larger intensive care units (ICUs), mostly understaffed and have to deal with a rapid turnover of patients. Critical care nurses are the kingpins in ICUs and are responsible for effective and efficient management of the units.

The objective was to describe the experiences of critical care nurses in the management of a large intensive care unit.

A qualitative, exploratory and descriptive design was used.

The setting was a multi-disciplinary intensive care unit of a teaching hospital.

It is evident that there are several problems experienced by nursing staff in the management of the intensive care unit such as overcrowding and business of the unit, staffing and equipment and supplies shortages.

The experiences described call for multiple strategies in helping all the critical care nurses to manage this large unit effectively.

RELATION BETWEN SELF-CARE BEHAVIOR AND SELF-CARE NEEDS IN PATIENTS WITH HEART FAILURE (POSTER)

Jaleh Mohammad Aliha, Mohsen Azarbad, Farangis Shahpourian, Forough Rafiee, South Africa

The cost of repeated hospitalization of patients suffering from congestive heart failure (CHF) makes the health care providers to think of some proper ways to promote self-care behaviors of patient by improving their knowledge and abilities to do so. Therefore, assessing their self-care behaviors, needs and abilities is of a great importance.

The objective was to determine self-care behaviors and their relation to the needs and abilities of patients with CHF .

This was a descriptive correlational study based on orems self-care

theory. Through convenience sampling 125 patients were selected. Data was gathered by using4 different questionnaires.

Results showed that more than half of the patients (52%) had good self-care behaviors and about 85% had moderate, good or very good level of knowledge but also more than 80% stated their learning needs as high or very high. There was a positive significant relationship between self-care performance and learning needs ($r = 0.57$, $p = 0.000$). Self-care performance had a negative and significant relation with self-care knowledge limitations ($r = -0.667$, $p = 0.000$), A positive significant relationship was seen between self-care performance and knowledge ($r = 0.665$, $p = 0.000$). Basic conditioning factors of age, education, economic and living areas situation, health status, ejection fraction ratio, health problems, family support and accessibility to medical centers were related to knowledge and also to self-care performance.

Regarding the results we can conclude that nurses knowledge about patients self-care behaviors, their learning needs, their limitations of knowledge and also their knowledge about self-care and basic conditioning factors will help them to perform their supportive-educative intervention role based on Orem's self-care deficit theory.

EVIDENCE-BASED NURSING GUIDELINES FOR PRONE POSITIONING OF ADULT, VENTILATED PATIENTS (POSTER)

Suegnet Nortje, Elzabe Nel, Anna Nolte, South Africa

Prone positioning of a critically ill patient poses a challenge to nursing interventions, but it remains the responsibility of nurses to develop a way to provide the same basic and intensive care to patients lying prone as opposed to patients lying supine.

The purpose of this study was to do a systematic review in order to: Explore the evidence in support of the beneficial nursing interventions during prone positioning of ventilated patients and to develop evidence-based nursing guidelines with regard to the nursing process.

This exploratory, descriptive and retrospective systematic review includes data from 45 clinical trials, with a total population of 2148 patients.

Data were extracted onto data abstraction forms, assessed for methodological quality and summarised into evidence tables.

All statistical calculations for the meta-analysis were performed by the RevMan 4.2.8 program Prone positioning showed significant ($p < 0.0001$) increases in the PaO2 (WMD = 11.43) and the PaO2/FiO2 ratio (WMD = 21.58, 95% CI = 11.36; 31.8).

The effects of complications, oxygenation and hemodynamic outcomes compared against the different prone positioning protocols had inconclusive results. Nursing guidelines to prone positioning were developed based on the best available evidence.

The lack of nursing-care related articles on prone positioning were a major drawback. Based on these results, recommendations are made towards further study on the nursing care of prone positioned patients.

USING EVIDENCE-BASED PRACTICE TO REDUCE VENTILATOR ASSOCIATED PNEUMONIA

Kathleen Ohman, South Africa

Ventilator associated pneumonia (VAP) has been on the increase with a reported mortality rate of 25%. Research identifying causative factors and practice changes to reduce its incidence has been conducted (Dreyfus, 1991; Kotilainen, 1997). Weinstein, Chinn, and Larson (2004) reported that pulmonary aspiration increases with supine positioning and pooling of secretions above the ET tube cuff. Valles (1995), Mahul (1992) and Kollef (1999) found that special ET tubes with continuous suction remove pooled secretions above the cuff and decreased VAP by 50%.

In 2004, the Center for Disease Control and The American Association of Critical Care Nurses published recommendations to reduce VAP. Recommendations included establishing an oral care protocol, routine subglottic suctioning, HOB elevation 30°-45°, and reducing the frequency of ventilator circuit changes. Professional standards of the American Association of Respiratory Care support these recommendations.

This presentation will describe the research and US recommendations for reducing VAP. The process by which one US hospital changed the practice for ventilated patients to drastically reduce the incidence of VAP will be described. The changes included revising a mandatory ventilator bundle adding DVT and PUD prophylaxis, HOB elevation, daily sedation vacation, daily weaning assessment, decreased frequency of tubing changes, and increased oral care, endotracheal and subglottic suctioning frequency. A family information sheet explains the importance of these measures.

Within six months of implementing the practice change there was 2.75 lives saved and the number is growing. The benefits of the practice change, including cost and saved lives, will be addressed.

KNOWLEDGE OF ICU NURSES REGARDING GLYCAEMIC CONTROL (POSTER)

H Perrie, S Schmollgruber, South Africa

Maintaining normoglycaemia has been shown to have beneficial effects on the outcome of critically ill patients. However, in order to safely implement glycaemic control and avoid unnecessary complications associated with this practice, the nurse needs to have an adequate knowledge.

The aim of the second part of this study, for MSc dissertation, was to describe the knowledge of ICU nurses regarding glycaemic control, to compare the difference in knowledge between ICU trained and non-ICU trained nurses and to describe the impact of years of ICU experience on this knowledge.

A prospective, descriptive, non-interventional study method was used. Approval was obtained from the ethics committee and other relevant authorities. The questionnaire used was developed and validated by two groups of ICU nursing experts. The study population included all consenting ICU nurses working in the selected units.

There were 136 participants in the study, (68 ICU trained and 68 non-ICU trained). The mean score obtained was 48.71% (SD 13.30), ICU trained participants obtaining 51.26% (SD 11.74) and non-ICU trained obtaining 46.16% (SD 14.34). The correlation between knowledge and years of ICU experience was poor ($r=0.168$).

This study found a lack of knowledge regarding glycaemic control, no significant difference between ICU trained and non-ICU trained nurses and a poor correlation between knowledge levels and years of ICU experience.

KNOWLEDGE OF ICU NURSES REGARDING WEANING FROM MECHANICAL VENTILATION (POSTER)

H Perrie, S Schmollgruber, South Africa

Protocol-directed weaning has been associated with reduced duration of mechanical ventilation, decreased risk of complications, decreased length of ICU stay and reduced cost of ICU. Nurses, however, require a sound knowledge of ventilation in order to safely implement a weaning protocol.

The aim of the third part of this study, for MSC dissertation, was to describe the knowledge of ICU nurses regarding weaning from mechanical ventilation, to compare the difference in knowledge between ICU trained and non-ICU trained nurses and to describe the impact of years of ICU experience on this knowledge.

A prospective, descriptive, non interventional study method was used. Approval was obtained from the ethics committee and other relevant

authorities. The questionnaire used was developed and validated by two groups of ICU nursing experts. The study population included all consenting ICU nurses working in the selected units.

There were 136 participants in the study, (68 ICU trained and 68 non-ICU trained). The mean score obtained was 50.00% (SD 17.16), ICU trained participants obtaining 53.99% (SD 18.19) and non-ICU trained obtaining 46.01% (SD 15.18). The correlation between knowledge and years of ICU experience was poor (r=0.118).

This study found a lack of knowledge regarding weaning from mechanical ventilation, no significant difference between ICU trained and non-ICU trained nurses and a poor correlation between knowledge levels and years of ICU experience.

KNOWLEDGE OF ICU NURSES REGARDING PAIN MANAGEMENT (POSTER)

H Perrie, S Schmollgruber, South Africa

Pain has been cited as one of the greatest stressors to ICU patients, and has been associated with poorer patient outcome, unnecessary suffering and added health care expenditure. Nurses require an adequate knowledge in order to ensure optimal pain management of the patients in their care.

The aim of the first part of this study, for MSC dissertation, was to describe the knowledge of ICU nurses regarding pain management, to compare the difference in knowledge between ICU trained and non-ICU trained nurses and to describe the impact of years of ICU experience on this knowledge.

A prospective, descriptive, non interventional study method was used. Approval was obtained from the ethics committee and other relevant authorities. The questionnaire used was developed and validated by two groups of ICU nursing experts. The study population included all consenting ICU nurses working in the selected units.

There were 136 participants in the study, (68 ICU trained and 68 non-ICU trained). The mean score obtained was 43.97% (SD 15.45), ICU trained participants obtaining 45.07% (SD 16.01) and non-ICU trained obtaining 42.86% (SD 14.91). The correlation between knowledge and years of ICU experience was poor (r=0.031).

This study found a lack of knowledge regarding pain management, no significant difference between ICU trained and non-ICU trained nurses and a poor correlation between knowledge levels and years of ICU experience.

NURSES' ACCURACY IN ESTIMATING BACKREST ELEVATION

H Perrie, S Windsor, J Scribante, South Africa

Elevating the backrest of ventilated patients has been associated with a decreased incidence of ventilator associated pneumonia (VAP). The CDC has recommended a backrest elevation of between 30° and 45° for ventilated patients.

The aim of this study was to describe nurses' accuracy in assessing backrest elevation and their knowledge of why this is recommended.

A prospective, cross-sectional and descriptive study was undertaken. Approval was obtained from the ethics committee and other relevant authorities. A convenience sample of nurses working in the selected ICUs on the study days was used.

Thirty-nine nurses participated in this study. The angle of the backrest was accurately assessed by 16 (44%) participants. All the others overestimated the angle Only 11 (28.2%) participants correctly stated that backrest elevation decreased the risk of aspiration, with only one (2.56%) participant adding that this may decrease the risk of VAP.

The results indicate that the nurses in this study may need assistance to accurately estimate backrest elevation angles. Furthermore nurses need to be aware of recommendations regarding patient care.

THE EXPERIENCES OF CRITICAL CARE STUDENTS IN PRESENTING CASE STUDIES (POSTER)

M Phillips, Y Botma, South Africa

Students in the Advanced University Diploma in Critical Care (General) programme at the UFS annually, present three case studies on critically ill patients, with different diagnoses they have nursed for at least 18 hours, according to a given instrument.

The objectives of this study were to determine the positive and negative experiences of critical care students regarding case presentations during 2006 and to generate recommendations on how to improve this experience for future students.

A descriptive, quantitative study was performed. Consensus regarding the most important experiences and recommendations were obtained by means of the nominal group technique.

Participants reflected in silence on three questions posed to them. Individually they listed five ideas on separate 3 x 5 index cards. Ideas were recorded using round-robin recording. Each participant rated, from the group's list, five items most important to them. The numeric value of each item was calculated and the items with the highest score were listed according to significance.

The first positively rated experience was that they learned to prioritize the patients' health care needs. The participants rated the stress associated with the presentations as the most negative experience. An orientation video that illustrates what is expected of them will most probably reduce the stress levels of future students.

Exposure to case presentations critical care students developed skills required in the critical care environment, like prioritization, stress management and a structure to base their performance on.

THE ROLE AND EFFECTIVENESS OF A NURSE-PRACTITIONER INTENSIVE CARE OUTREACH SERVICE

Alison M Pirret, New Zealand

This paper explores the role and effectiveness of a nurse practitioner intensive care (ICU) outreach service.

Following introduction of a nurse practitioner ICU outreach service, concurrent data on patient demographics, number of patients and visits, type of interventions required, and outcome measures were collected between July 2006 and April 2007. Data analysis was completed using descriptive statistics, run and control charts.

Outcome measures included comparison of ICU readmissions, ICU readmission length of stay, APACHE II scores of ICU readmissions, ICU patient days/acuity; ICU readmission mortality, and ward cardiac arrests following establishment of a nurse practitioner service with concurrent data collected one year prior to implementation of the service.

There were 125 patients referred to the Nurse Practitioner which resulted in a total of 509 patient visits. The most common interventions required during visits included: patient/family support/education (22%), blood tests (17%), review/addition of medications (17%), electrolyte replacement (14%), specimen culture (10%), interdisciplinary referral (8%), altering O2 requirements (8%), and radiology investigations (5%). Run and control charts demonstrate a statistically significant reduction in ICU readmissions, ICU readmission length of stay and APACHE II scores of readmissions. There was no significant change in ward cardiac arrests. Currently ICU readmission mortality numbers are too small for analysis.

Data analysis demonstrates a Nurse Practitioner led ICU outreach service has a positive effect on patient outcomes.

QUALITY MANAGEMENT IN CRITICAL CARE NURSING

Maria Isabelita C Rogado, The Philippines

Many published articles have pointed out the importance of having quality indicators that are nursing – sensitive quality indicators demonstrating that nurses make the critical, cost effective difference in providing safe, high – quality patient care. According to Maas, Johnson and Morehead this type of indicators will reflect patient outcomes that are affected by nursing practice. However Needleman et al pointed out that most of the study in this area focuses on the relationship of nursing with negative or adverse patient outcomes such as medication errors, patient falls and nosocomial infections and that there is a need to have studies showing the relationship of nursing and positive patient outcomes.

The State Nursing Association has identified ten nursing sensitive quality indicators for acute care setting. These nursing-sensitive indicators reflected the structure, process and outcomes of nursing care.

Understanding that the concept of quality is not just the responsibility of one but is a universal responsibility, it must be totally pervasive. We will be able to see quality in critical care once we think of quality concepts in what we do every day and add up the management techniques in the area of care provider motivation, measurement and rewards.

Many examples and ideas can be drawn to lead the enthusiastic person in identifying quality concepts such as: outcome of rapid response team, patient safety goals from The Joint Commission perspective and nosocomial infection rate.

Critical care practice offers vast opportunities for quality management and process improvement. As care practitioners quality and patient safety is our primary concern. When we move to identify quality process improvement we have to take note and measure the incremental steps that we take.

COMMUNICATION WITH RELATIVES OF CRITICALLY ILL PATIENTS AND ETHICAL PRINCIPLES (POSTER)

Drago Satosek, Marusa Brvar, Slavica Klancar, Slovenia

Communication knowledge places in the limelight comprehension between those who are communicating. For successful communication of nurses with patient or patient's relative much more is urgent and required. This communication has to be efficient, adjusted for easier understanding and highly respectful. All this is needed because a patient in the nursing process has a lot of difficulties: a severe illness, concerns about survival and long-term consequences and concerns about their family. That is why this communication has to be particularly sensitive, and above all, understandable- also to persons with no or very little medical knowledge.

Patients' relatives have at all time very important role and that is why we have to communicate with them attentively. We have to understand all the facts that influences on our communication. Sometimes a patient's condition depends on this communication. That is why nurses must correctly perceive needs of patient's relatives.

A lot has been written about communication with relatives, but there are no one-sided, easy answers when it comes to concrete cases of communication. This has to be substantially sufficient and in congruent with nurses competences. Patient's relatives often take offence at incomplete information from nurses. In our country we often hear nurse saying, that she does not have competences to give information. This should not be correct. Nurses must give information that is in connection with nursing practice. To do so, a nurse should know her/his work as well as competences. It is not understandable why nurses are not presenting their work and profession as entirety at the time when they must prove their profession again and again.

Most common information that is expected from nurses is information about a nursing plan, ongoing nursing interventions and their outcomes and about all needs of a patient. Nurses have to ascertain and meet those needs on daily basis. This brings patient's satisfaction and improvement of his/her condition.

Ethical principles in communication enable us - nurses to offer sympathetic and sensual admittance to relatives. Nurses can offer plenty information if they are enough educated for their profession. Nurses can provide information to relatives about all patients' needs, desires and their intentions. That is why nurses say that they are ambassadors of patients and their rights.

A PROFILE OF POST GRADUATE ICU NURSING RESEARCH (POSTER)

Juan Scribante, South Africa

ICU nurses are accountable for setting standards of quality with regard to ICU nursing, and should contribute to ICU nursing practise by undertaking and implementing research. ICU nursing research also contributes to the progression of ICU knowledge, promotes better patient care and best practice, all of which address important challenges that ICU nursing is facing currently in South Africa.

The aim of the study is to compile a profile of post graduate ICU nursing research that has been completed 2006 in the Nursing Departments of South African Universities.

The objectives were to determine the number of projects completed at Masters and Doctorate levels respectively and compare the 2006 profile with the 2000-2005 profile (Scribante & Bhagwanjee, 2006).

A quantitative research design was used. WITS Ethics approval was obtained. Programme leaders completed a consent form and an electronic questionnaire. The data was entered into a database and analysed using descriptive analysis techniques.

The number and focus of projects completed during 2006 are comparable with the 2000-2005 profiles (Scribante & Bhagwanjee, 2006). No doctorates and 17 Masters were completed in 2006.

There is a desperate need to increase the output of postgraduate ICU nursing research. This is an objective way for nurses to maintain and improve their position in the ICU team.

Reference

Scribante J, Bhagwanjee S: A profile of postgraduate critical care nursing research in South Africa 2006; 22: 78-84.