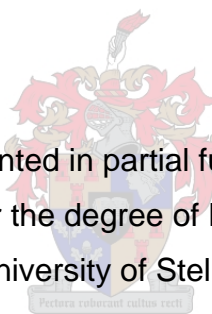


**AN INVESTIGATION INTO THE SCOPE OF PRACTICE
OF A REGISTERED CRITICAL CARE NURSE
IN A PRIVATE HOSPITAL**

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Thesis presented in partial fulfilment of the
requirements for the degree of Master of Nursing
at the University of Stellenbosch.



December 2005

Study Leader
Prof. E.B. Welmann

Declaration

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature: . 

Date: 3 November 2005

Abstract

The critical care nurse works in an environment where patient need often shifts the parameters within which she or he practices. It is expected of a skilled critical care nurse to be able to make independent decisions and take action regarding patient care based on her or his knowledge and skills without discounting the parameters of her or his scope of practice. Practice experience has indicated that the critical care nurse is often uncertain about whether her or his clinical activities are protected by the regulations provided by the Nursing Council. This is more specifically true in the private hospital industry where medical advice or assistance is not always easily available. This situation led to the following research question:

Do the available professional and legal guidelines provide an appropriate foundation to guide the practice of the registered critical care nurse in the private hospital sector critical care environment?

A non-experimental descriptive study with a qualitative orientation was conducted in 19 private hospitals in the Western Cape. Through non-probability, random sampling, 71 registered critical care nurses were included in the study. A questionnaire was designed and validated to collect the data. Quantitative data was analysed through Excel[®] while qualitative data was analysed thematically.

It was found that the legal and professional guidelines in place at present do provide a foundation for the clinical activities of critical care nursing in the private hospital sector. It is suggested that it is rather the critical care nurses' interpretation of the Scope of Practice (No.R.2598 of 30/11/1984 as amended) that limits their practice as opposed to the wording of the regulations.

It is recommended that critical care nurses must determine nursing care parameters based on patient need, using the regulations as a foundation for critical, analytical and reflective practice rather than as a set of rules to be followed.

Key words: Scope of practice, critical care practice, ICU nursing care, private hospital nursing practice

Opsomming

Die kritiekesorgverpleegkundige werk in 'n omgewing waar pasiëntebehoefte gereeld die parameters waarin sy of hy praktiseer, verskuif. Dit word van 'n bekwame kritiekesorgverpleegkundige verwag dat sy of hy onafhanklike besluite en aksies met betrekking tot pasiëntesorg, gebaseer op haar of sy kennis en vaardighede, sal neem sonder om die parameters van haar of sy bestek van praktyk te oorskry. Praktykondervinding het getoon dat die kritiekesorgverpleegkundige dikwels onseker is oor watter van haar of sy optredes deur die Regulasies, soos deur die Raad op Verpleging gespesifiseer word, beskerm word. Dit is nog meer spesifiek van toepassing in die privaathospitaal-industrie waar geneeskundige advies en bystand nie altyd maklik beskikbaar is nie. Die situasie het tot die volgende navorsingsvraag aanleiding gegee:

Voorsien die beskikbare professionele en wetlike riglyne 'n geskikte grondslag om die praktyk van 'n geregistreerde kritiekesorgverpleegkundige in die privaatsektor- kritiekesorgomgewing te rig?

'n Nie-eksperimentele, beskrywende studie met 'n kwalitatiewe oriëntasie is in 19 hospitale in die Wes-Kaap onderneem. Deur nie-waarskynlikheids-, toevallige steekproefneming is 71 geregistreerde kritiekesorgverpleegkundiges in die studie ingesluit. 'n Vraelys is ontwerp en gevalideer om inligting in te samel. Kwantitatiewe data is deur middel van Excel ontleed terwyl kwalitatiewe data tematies ontleed is.

Daar is gevind dat die wetlike en professionele riglyne wat tans beskikbaar is, 'n grondslag bied vir die kliniese aktiwiteite van kritiekesorgverpleegkundiges in die privaathospitaal.. Dit word voorgestel dat dit die kritiekesorgverpleegkundige se interpretasie van die Bestek van Praktyk (No.R.2598 of 30/11/1984 soos aangepas) is wat hulle praktyk beperk, eerder as die bewoording van die regulasie self.

Daar word aanbeveel dat kritiekesorgverpleegkundiges parameters vir verpleegsorg, gebaseer op pasiëntebehoefte, moet bepaal. Die regulasies moet as grondslag vir kritiese, analitiese en denkende praktyk gebruik word, eerder as om dit te sien as 'n stel reëls wat gevolg moet word.

Sleutel woorde: Bestek van praktyk, kritiekesorgpraktyk, ISE verpleegsorg, privaathospitaal-verpleegpraktyk

Acknowledgements

I would like to thank Professor Welmann for her guidance, patience and enthusiasm throughout this research journey. I would also like to thank my colleagues who helped me maintain my motivation and assisted in the final push to the finish line.

Thank you to the critical care nurses who participated in this study and to those who will still play roles in the development of critical care nursing.

Thank you to my family and friends who have remained convinced of my abilities from the beginning of this project.

The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the National Research Foundation.

Dedication

To Arthur and Jarryd, who make this that much more worthwhile.

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CHAPTER 1: INTRODUCTION

1.1 Rationale

It has been recognised for many years that the critical care registered nurse works in an environment where traditional role boundaries between the medical and nursing professions become blurred and are in a state of constant change (Armstrong, 1992). As early as 1978, Clark, in an introduction to a critical care nursing text, commented: “She now moves into the hinterland between the medical and nursing professions where she will be required to exercise a degree of initiative and accept a measure of responsibility greater than that of any newly qualified doctor.” While this statement does reflect a rather dated view of the nurse-doctor relationship, it does begin to acknowledge the complex environment of nursing practice in the critical care milieu.

The critical care nurse is expected to take responsibility and be accountable for her or his decisions made and actions taken related to any aspect of patient care in a critical care unit. The critical care nurse is relied on by a spectrum of people to collect, collate and interpret relevant data, adapt patient management prescriptions, ensure the doctor remains informed of the condition of the patient; all while caring and providing for the basic essential needs of the critically ill patient. In the South African context, other variables force this relationship between doctor and nurse to become less defined. Examples of these variables include: nursing staff shortages, budget constraints, loss of registered critical care nurses as well as experienced critical care doctors, and increasing patient demands related to both volume of patients and quality of care. This increases the responsibilities of the critical care nurse while resources and support systems decrease.

The Nursing Act (Act No. 50 of 1978 as amended) provides for the promulgation of regulations that interpret legal terminology into guidelines for nursing practice. The regulations form part of the recognition of professional status conferred on a nurse who has completed a South African Nursing Council approved diploma or undergraduate nursing programme.

The Scope of Practice (No. R2598 of 30 November 1984, as amended) provides the legal professional parameters for nursing practice. These broad guidelines for nursing practice were developed from research, discussion and peer review to provide the nurse with a practice domain in the healthcare sector, while acknowledging the multiple overlaps between the various disciplines – medical, nursing and allied health practitioners – involved in the care of the patient. The same regulations also apply to all disciplines within the nursing profession (critical care, oncology and primary healthcare, etc.), with the responsibility resting on each discipline to interpret the regulations appropriately to their specific field.

The practice of critical care nursing falls within the domain of general nursing (medical and surgical) which is a mainly hospital-based practice of nursing. This particular domain of nursing practice provides care to patients of all age groups and across many different health needs. Critical care nursing grew from an identified need for closer monitoring and more individualised care of post-operative patients initially, and this 'intensive care' then spread across to other groups of patients. Thus critical care nursing has its foundations in the general nursing domain and has developed to become a specialised field within this domain.

When a novice enters general nursing practice, the same regulations apply to this recently-qualified professional nurse as to the experienced nurse with a specialist postgraduate clinical qualification. Each nursing practitioner must then apply the guidelines of the Scope of Practice within her or his working environment as appropriate to her or his competence level and clinical experience. This means that the regulations governing nursing practice must be flexible enough to accommodate the spectrum of proficiency from the novice registered nurse in critical care to the expert registered critical care nurse.

The specialist critical care nurse is able to, and is required to, simultaneously consider, organise and verify many components of patient data; discern the urgency of any changes in the clinical status of a patient and prevent or respond to complex physiological emergencies. In addition to this, the critical care nurse also focuses on providing the emotional, psychological and health education needs of this patient and her or his family. Due to the precarious health status of the critically ill patient, this role is as complex as providing for the physiological care of the patient.

The critically ill patient requires concentrated nursing focus on providing for essential care needs (basic needs), as poor nursing care will result in further complications that may have far-reaching consequences for the patient's ability to achieve health again. In addition to these, the technological support and monitoring devices used in the management of these patients place responsibility on the critical care nursing specialist to understand their role and use in patient management. As well as having a clear grasp of the interaction between the patient and machine, the patient must always remain the focus of the critical care nurse. The critical care nurse must also understand the allied health professionals' treatment plan for this patient (medical, pharmacological, physiotherapy, dietician, etc.) as it is the critical care nurse who will co-ordinate the application of these plans, as well as monitor and assess the patient's response to these interventions.

The physiological complexity and intricacy of managing the critically ill patient, as well as the need to minimise risk on many fronts, requires that the critical care registered nurse contemplate and initiate decisions and actions which may be considered to be beyond the parameters described in Regulation 2598 (as amended). It is of significant importance to the patient, registered nurse and other members of the healthcare team that the interpretation of the regulations must provide for the nursing skills of patient assessment, care planning and care intervention in the field of critical care nursing. A professional and legal foundation from which one can provide quality nursing care for the patients in the critical care context and environment must be obvious.

The contribution to the management of the critically ill patient by the critical care nurse is receiving much attention in literature. The impact of the nurse on patient outcome is being investigated. An increasing body of research clearly identifies the vital role of the specialist knowledge, skills and experience of the trained critical care nurse in patient management, risk management, unit management, mentoring of colleagues and research. All of these must be performed within the parameters set by professional regulating bodies and adhere to all other legal requirements applicable to the practice of the individual as a critical care nurse in the critical care environment.

A crucial problem for nursing in South Africa has been the loss of experienced nurses in all disciplines, but particularly in critical care nursing. For the past 10 years approximately, a major exodus of trained and experienced critical care nurses has occurred. The

researcher, as an experienced registered critical care nurse, found that the nursing staff in the critical care units are younger, not only in age but also in experience. These young, inexperienced registered nurses are confronted with critically ill patients without mentors or role models working alongside them. The collegial 'guiding hand' has been significantly reduced in the critical care units. This creates a sense of either insecurity or, to the opposite extreme, invincibility in the inexperienced nurse, resulting in the inability to do the right thing at the right time in the right manner or to understand the consequences of her or his decisions. The nursing care of these patients is diminished when the novice to critical care nursing does not have an experienced critical care nurse to teach and guide her or his experiences. Benner (1984) applies the five levels of proficiency in skill acquisition of the Dreyfus Model to the practice of nursing. These levels are that of novice, advanced beginner, competent, proficient and expert. The novice needs defined rules within which to practice; "the rule-governed behaviour typical of the novice is extremely limited and inflexible" (Benner, 1984:21). If the proficient and expert nurses are not present to provide the 'safety net' within which the novice can apply the rules to gain experience and insight into the world of critical care nursing, then surely the Scope of Practice has to be obviously applicable to the practise of critical care nursing. In order for the Scope of Practice to be 'obviously applicable' for a novice, this must be interpreted within the context of the critical care environment. This is particularly true in the private healthcare environment where the critical care nurse works with less available specialist medical support. Those registered critical care nurses practising within this context must provide their interpretation so that a framework for critical care nursing based on the Scope of Practice can be proposed and subjected to debate amongst the critical care nursing fraternity.

Should the novice be left to develop her or his own set of rules, she or he may then have to learn from other sources that may include medical practitioners or critical care technicians. The focus of these professionals is not primarily on the nursing care of critically ill patients and therefore these individuals are unlikely to be able to understand, illustrate or demonstrate the role a nurse plays in the critical care environment. The nurses who learn in this way may tend to lose their focus on the patient as recipient of their care and rather focus on the treatment plan or technology as their main concern. The researcher has found that these nurses often narrow their patient care perspective, because being concerned with the whole picture is too threatening or the responsibility is

too overwhelming. This results in the novice ignoring or rejecting as irrelevant those aspects of nursing care they do not understand. Attention to essential care needs is reduced as these critical aspects of nursing care are dismissed as unimportant in comparison with the technological support or medical interventions being performed.

The researcher has found that there is a tendency amongst these nurses to crisis manage patients rather than manage preventatively or proactively, as they simply do not have the experience, knowledge or support to function any other way. The absence of an experienced critical care nurse also allows the standards of nursing care to become compromised. If there is no one there to show and ensure that the 'right thing is done at the right time in the right way', then nursing care standards cannot be maintained. The interpretation and application of the Scope of Practice regulations should provide the novice with guidance in the absence of experienced mentors. However, unless the experienced registered critical care nurse has actively considered how to interpret and apply the regulations in the critical care environment, the novice (and essentially, the patient) has been left in the dark.

The Queensland Nursing Council (1995) identified that a nurse must be able to describe what she/he does and why it is important in order to be able to clarify their Scope of Practice. The experienced critical care nurses who are still present in the units are faced with an ongoing battle to explain and reinforce the importance of nursing care in the critically ill and it is expected that the Scope of Practice should provide them with the foundation for this. The Scope of Practice must allow the registered critical care nurse to describe her or his activities so that, first and foremost, the nurse is able to attach value to her or his contribution to the critically ill patient. This then extends to patient, employer colleagues and the healthcare sector at large being able to identify the complex yet subtle role of the nurse in critical care (and in nursing generally) and value nursing care. This extends further than the intrinsic value of the nurse's knowledge, skill and manner when caring for a patient, but also includes the necessity of quantifying these in terms of monetary value. Provision of healthcare is expensive with the nursing staff contributing the greatest cost to the employer. The nurse must be able to quantify her or his contribution and the nursing profession must begin to elucidate the monetary value of their caring. To

be able to do this, the Scope of Practice must be interpreted in a realistic, practice-based manner.

The researcher, who has worked in the private hospital industry critical care environment as a registered critical care nurse and critical care educator for ten years, has experienced many of these problems mentioned above. During these years, it became clear that, apart from the Scope of Practice providing a foundation for the rendering of quality critical nursing care, the regulations governing practice should allow for the development of a critical care nursing practice framework. These would support the experienced critical care nurse in her or his practice, as well as provide the neophyte with some concrete nursing practice foundations in areas where experienced, expert support is limited. This will also assist in the provision of clarity concerning nursing practice roles or function.

In addition to the concerns raised in previous paragraphs, there are additional concerns around critical care nursing practice in the private sector. One of the concerns that has a significant influence on critical care nursing practice in the private sector is the reduced availability of continuous medical assistance in the units as compared to the state healthcare sector. The doctor treating the patient is usually not easily available when required as she or he has other commitments that may take her or him out of the hospital, or there may be a number of doctors treating a patient with no identified primary medical care manager. This creates a situation where the critical care nurse must manage any change in the clinical status of the patient that arises without the input of a medical practitioner until she or he arrives. Benner (1984:xxi) states in the preface to her text, "In the real world, nurses and physicians alike have good and bad days; some are frankly incompetent. When immediate physician attention to a crisis is not available, the nurse fills the gap far more often than is formally acknowledged. We can claim this is not nursing, but we do so only by ignoring what nurses *actually* do ... by attending to the ideal and presenting only what we hope to become, we would miss much of what is significant about our actual practice."

A medical practitioner is not required to refer a critically ill patient to a colleague with appropriate experience or a specialist qualification in critical care medicine. This is a problem, because in some private critical care units general practitioners continue to be the primary medical attendee rather than handing the care of their patient over to a more

suitably qualified or experienced colleague after admitting the patient to a critical care unit. This particular problem could place the critical care nurse in the difficult position of trying to guide the medical care of the patient or to encourage the medical practitioner to refer the patient to a more skilled colleague.

Patients admitted to private hospitals carry the financial responsibilities attached to using any services industry. Private healthcare is expensive and thus patient expectations regarding the quality of the hospitalisation experience are very high. This is particularly so when the patient is admitted into a critical care unit. The critical care nurse has additional responsibilities for the financial management of the unit and the employer has expectations with respect to quality management programmes. Managed healthcare has further implications for the practice of critical care nursing, particularly when ethical considerations regarding funding and care must be balanced. All these are affected by how the critical care nurse interprets or applies her or his Scope of Practice.

A concern expressed by experienced registered critical care nurses and educators from all sectors is that the critical care nurse finds herself or himself in a 'vacuum' when trying to identify whether decisions and actions are within the Scope of Practice regulations as set by the professional body. This concern is also echoed by the Critical Care Society of Southern Africa. There are however very few studies that have attempted to illustrate the Scope of Practice regulations in a practical application that would enable the registered critical care nurse to understand how to apply these to her clinical nursing care. A paper by Scribante, Muller and Lipman (1995) describes the professional-ethical responsibilities of the South African critical care nurse. In this paper, they state, "It is only with the full understanding of the professional-ethical responsibilities by all members of the critical care team that the professional-ethical responsibilities of the CCN can be appreciated and utilised optimally."

Considering the above-mentioned discussion, the question raised here is whether the Scope of Practice, as regards the actions of the registered critical care nurse in a private hospital, provides an adequate professional foundation for nursing practice in the critical care environment.

The researcher, based on her work experience and discussions with other experts in critical care nursing, identified the following questions to be raised as the rationale for the study:

- What professional and legal guidelines exist for nursing practice in the critical care environment in South Africa; and
- Do the available professional and legal guidelines provide an appropriate foundation to guide the practice of the registered critical care nurse in the private hospital sector critical care environment?

1.2 Objectives

The objectives of this study were to:

- Determine the professional and legal guidelines governing critical care nursing practice;
- Investigate the opinion of the registered critical care nurse in the private hospital sector with respect to identified professional regulations and critical care nursing activities;
- Identify and discuss endpoints of the Scope of Practice as identified by the critical care nurse in the private hospital sector critical care environment; and
- Make recommendations based on the findings of the research.

1.3 Research methodology

The methodology refers to the scientific processes and steps followed to conduct the research study.

1.3.1 Approach and design

An exploratory, non-experimental, descriptive approach is followed to study and describe this investigation into the Scope of Practice for the registered critical care nurse in the private hospital industry.

Triangulation, a concept of combining the qualitative and quantitative aspects of research, was selected to be the most appropriate design for this study. When addressing the Scope of Practice, one finds that, although certain aspects, such as demographic data, are numerically accountable and can thus generate quantitative data, there are various aspects that are more qualitative in nature, for example how the nurse defines her or his Scope of Practice. The study reflects elements of both a qualitative and quantitative nature.

1.3.2 Sampling

Purposeful sampling is utilised in the selection of private hospitals used in this study. Non-probability sampling governed the selection of questionnaire respondents. The sample is limited to critical care registered nurses with at least one year of post-specialist qualification experience, excluding those working in paediatric or neonatal intensive care units.

1.3.3 Data collection

Data was collected by means of structured questionnaires over a period of fifteen months. The researcher acted as the primary instrument for data collection.

1.3.4 Data analysis and presentation

Quantitative data was analysed using the Excel (MSOffice) program and with assistance of a statistician where applicable. Qualitative data was analysed through transcribing data, and selecting and reflecting on central themes and sub themes.

The data is presented in the form of graphs, tables and, where applicable, specific remarks are reflected or given in paraphrased form.

1.4 Conceptual framework

The researcher designed a flow diagram of the conceptual framework to facilitate this discussion (see Diagram 1: Flow diagram of the conceptual framework).

This diagram represents the framework on which the researcher has developed this study. This framework is based on the researcher's own experience and contemplation of what critical care nursing is and what it is that critical care nurses do.

The critical care nurse is seen as central in this study as it is her or his ability to interpret and apply the Scope of Practice that influences the patient in the critical care environment.

Essentially, the Scope of Practice is interpreted in the context of nursing care and what a critical care nurse does. The researcher views nursing care as the ability of a nurse to combine her or his knowledge and skills effectively, balanced by her or his attitudes and behaviour to meet the patient's needs efficiently.

Informal discussions with critical care nurse colleagues on this topic have led to the researcher developing the core concept of a critical care nurse as being 'a caring presence who mediates the interface'.

The first part of this concept, 'a caring presence', is seen in the attitudes and behaviour a critical care nurse cultivates and establishes as her or his manner of interaction with others (for example, patients, colleagues, family, employer, etc.) in the critical care environment.

The second part of this concept, 'mediates the interface', refers to the knowledge and skills attained and developed by the critical care nurse from the time she or he enters the critical care environment throughout her or his career.

This framework presents these concepts diagrammatically.

The first section of the framework can be regarded as equivalent to data collection. The critical care nurse identifies a patient's need. This need is filtered through a number of possible sources – the interface referred to above:

- data gathered about or from the patient (may include information about vital signs, comfort, pain, medical aid information, family, etc.)

- data about or from the nursing team (may include ability, availability, perceived competence of colleagues, etc.)
- data about or from the allied healthcare professionals (may include treatment plans, interventions, concerns, availability, etc.)
- data from the employer (may include policies, expectations, quality improvement programmes, etc.)
- data from technology (may include application, availability, accessibility, etc.)

The second section of the framework is equivalent to assessment of the information collected and planning of care based on the conclusions derived by the critical care nurse from the data. The researcher is of the opinion that this occurs under the influence of the critical care nurse's knowledge and skills on the one hand, and her or his attitude and behaviour on the other. Knowledge and skills will determine how the nurse understands the information gained about the patient's need and what activities will be required to act on this information. The caring presence associated with attitude and behaviour determines the manner in which the nurse will interact with the patient and other entities required to meet the patient's need. She or he reconciles the data gathered from all sources within her or his knowledge and skills base to decide what intervention is needed and how to go about it. This is where the critical care nurse 'mediates the interface'.

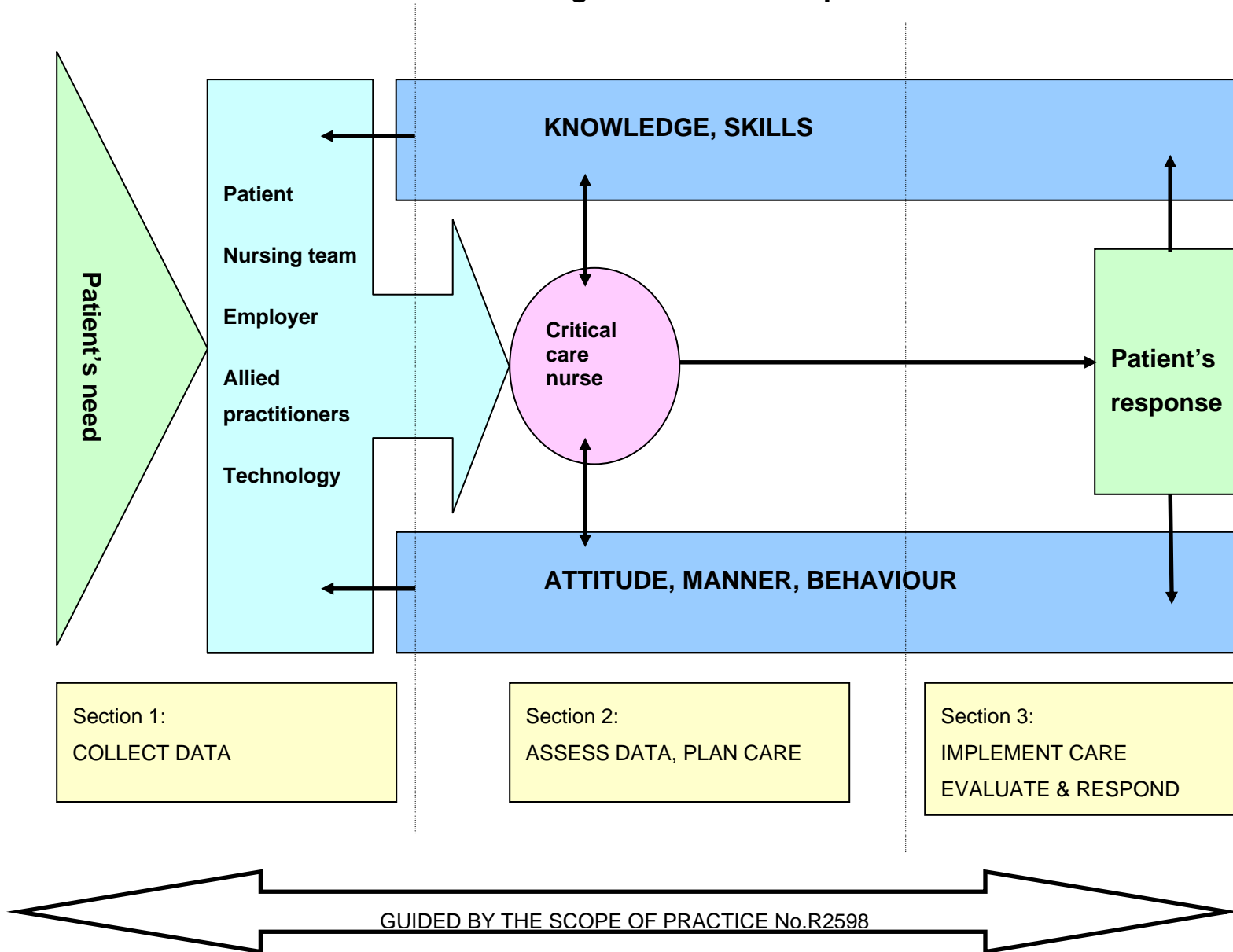
The third section of this framework includes the implementation of the nursing activities, evaluation of this implementation and the response of the patient – mediating the interface, all of which are informed and shaped by the knowledge, skills, attitude and behaviour of the individual critical care nurse.

Consideration of the Scope of Practice (R2598 as amended) by the critical care nurse underpins this process. How to first interpret the scope in the light of the patient's need and then how to apply the scope in the light of the plan of nursing care for the patient have to be examined.

The registered critical care nurse in the private critical care environment must decipher the Scope of Practice (R2598 as amended) to determine whether her or his unique practice requirements are satisfied within this professional legal context.

DIAGRAM 1.1

Flow diagram of the conceptual framework



1.5 Operational definitions

- *Nurse* describes an individual who provides care to a patient within the context of the healthcare environment. For the purposes of this study, 'nurse' will refer to the registered critical care nurse.
- *Post-basic qualification* is an advanced nursing qualification obtained in a defined area of study in nursing, following the completion of a diploma or nursing college programme in nursing.
- *Postgraduate qualification* is an advanced nursing qualification obtained in a defined area of study in nursing, following the completion of a degree or university programme in nursing.
- *Registered critical care nurse* is an individual who is registered with the South African Nursing Council as having obtained a post-basic or post-graduate qualification in critical care nursing science.
- *Critical care unit* is a specified area in a hospital where the patients are admitted needing specialised monitoring, interventions or organ support that requires intensive focus from nursing staff. It may also be referred to as an intensive care unit or intensive therapy unit. In this study, the term also refers to coronary care unit, neurosurgical unit, surgical intensive care unit and cardiothoracic unit. Critical care environment is regarded as synonymous with this definition for the purpose of this study.
- *Scope of nursing practice* includes direct care giving and evaluation of its impact, advocating for patients and for health, supervising and delegating to others, leading, managing, teaching, undertaking research and developing health policy for healthcare systems (ICN Position Statement adopted 1998, revised 2004).
- *Practice framework* is a guideline for the critical care nurse on which she or he can lay the foundation of nursing care of a critically ill patient. It may

include aspects of law, professional regulation, best clinical practice, research evidence, employer expectation, etc.

- *Allied healthcare professionals* indicate those healthcare practitioners, other than the nurse, involved in the care or management of a critically ill patient. These may include medical practitioners, occupational therapists, physiotherapists and dieticians.
- *Private hospital* is a hospital built, owned and managed by a company outside of the state healthcare sector.

1.6 Chapter outlay

Chapter 1: Introduction and rationale for the study

Chapter 2: Literature review

The literature related to the professional and legal parameters guiding critical care nursing practice as well as that applicable to specific identified practices is discussed.

Chapter 3: Methodology

The methodology used in terms of approach, sampling, data collection and data analysis is discussed.

Chapter 4: Results

The results of the study and the interpretation of these results are discussed.

Chapter 5: Conclusions and recommendations

Conclusions drawn from the study results, as well as recommendations by the researcher are discussed.

1.7 Summary

Critical care nursing in South Africa faces challenges in the political, social and professional arenas. It has become vital for the critical care nurse to identify solutions to these challenges if quality care is to be delivered to her or his patients. It is important that the critical care nurse can identify professional and legal problem areas early. This enables her or him to answer to and eliminate challenges to her or his professional status, thereby cementing the role she or /he is to play in the provision of healthcare to the people of South Africa.

In Chapter 1, a broad orientation and rationale to the study is given. The importance of addressing the concerns of the critical care nurse in terms of the legal and professional guidelines for her or his practice is outlined. The methodology used for the study is highlighted in brief.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The literature review is an important aspect of any research project. Clare and Hamilton (2004) state that the literature review is an extensive critical review of the existent literature on the research topic. The literature review ensures that the researcher demonstrates a deep understanding of all aspects of the investigated topic and provides the theoretical background and scientific foundation for the development of the project (Clare & Hamilton, 2004). It also enables the researcher to position the research within the body of knowledge developed in the broader context, in this case within the field of critical care nursing.

This chapter focuses on international and national literature relating to the role, responsibilities and scope of practice of nurses within adult intensive care environments.

The purpose of the literature review in this project was to:

- Identify the principles in law governing the critical care nurse's practice and explore the legal framework within which nursing practitioners function in the context of the private healthcare system;
- Describe the different South African Nursing Council regulations that have an impact on the practice of the critical care nurse;
- Explore international perspectives related to the role and functions of the critical care nurse; and
- Explore the practice and functions of a critical care nurse.

Literature was identified through conventional searches of the Medical Library (Stellenbosch University) and computerised literature searches. Core words used in the initial literature search included: Scope of nursing practice, critical care nurse practice and intensive care nursing. The span of the literature review was 30 years (from 1975 to 2005). This enabled the researcher to obtain an historical perspective of the evolving

role of the critical care nurse, from the quasi-dependent practitioner to the independent practitioner.

To meet the objectives of the literature review, the relevant literature will be discussed under the following headings:

- Legal framework
 - Principles of law
 - Legal liability
 - Employer-employee responsibilities
 - Negligence
- Professional framework
 - Professional registration
 - Regulations
- Perspectives on specialisation
 - International perspective
 - South African perspective
- Patient-focused care
 - Critical care nursing activities

2.2 Legal framework

The critical care nurse always remains subject to the law of the land in which she or he practises. In this research, the critical care nurse is thus subject to the statutory and common law used in South Africa.

The laws of the country provide the legal principles on which the practice of the critical care nurse is based. The scope of practice must be viewed in the context of these legal principles and therefore it is essential that one investigate these.

2.2.1 Principles of law

The principles of law that all actions of South Africans are measured against are:

- **Justice and fairness:** This principle creates social order by protecting the rights of one party from infringement by a second party. Searle and Pera (1995) state that this principle provides guidelines for human conduct and created mechanisms for the enforcement of these guidelines. In the critical care environment, this principle protects the patient while being cared for in the critical care unit, but also protects the nurse's rights.
- **Law changes with societal change:** Implicit in this principle is that, as society develops, the legal system evolves. Searle and Pera (1995) state that the law is subject to the dynamics of social change and need a measure of flexibility without endangering the need for constancy. Change in laws is usually accompanied by vigorous public debate. Examples can include the debates on changes to healthcare provision in South Africa related to primary and tertiary care.
- **The reasonable person:** Judgement is based on what a reasonable and prudent person would do in similar circumstances (Searle & Pera., 1995). This principle will be expanded on further in the text.
- **Rights and responsibilities of each human being.** Searle and Pera. (1995) state that rights are fundamental powers possessed by a person unless revoked by law, and responsibilities are obligations that emanate from a person's rights. The rights of South Africans are enshrined in the constitution of South Africa.

2.2.2 Legal liability

As the healthcare requirements of the public become more complex and the scope of the critical care nurse's practice adjusts accordingly, the risk of legal liability increases. The critical care nurse's conduct in all matters can be called to account under the concept of legal liability. This concept allows for a person to be held responsible by law for her or his conduct and the nurse can be called to compensate the aggrieved or injured party (Verschoor, Fick, Jansen & Viljoen, 1997).

Legal liability is divided into public (criminal) law and civil liability. Criminal law holds the state in authority over the individual and determines punishment accordingly; with the complainant not receiving compensation (Verschoor *et al.*, 1997). Examples here are assault, murder and *crimen injuria*. This implies that the nursing practitioner may make herself or himself guilty of one of these crimes in their private capacity or in their professional capacity whilst in the healthcare environment. The courts have to prove that the nurse chose to perform an act in the full knowledge it was wrong and she or he demonstrated malicious intent.

Civil liability regards the two opposing parties as equals. The person who causes harm must compensate the other party. The law aims to lay liability against those who caused the loss. Civil liability has its foundations in the subdivisions of private law, namely the law of contract and the law of delict. These legal concepts both indicate that an incorrect action on the part of one caused another party to be disadvantaged. The law of contract indicates that an agreement reached between parties has been breached, while under the law of delict the two parties are not agreed on the consequences of the defendant's behaviour and the claimant seeks compensation for damages suffered (Verschoor *et al.* 1997).

It is against this legal background that cases against nurses are filed and where the nurse's conduct of practice comes under scrutiny. The critical care nurse thus needs to be aware of how her practice is judged in terms of this concept of legal liability. As the public of South Africa become more educated with respect to their healthcare and consumer rights, it becomes more fundamental for the nursing practitioner to know what her or his practice boundaries are, in other words: where does right end and wrong begin? This is possibly more acutely so in the critical care environment where patients

are sicker, relatives are more emotionally fragile and deterioration in a loved one's condition may be seen as the fault of the critical care nurse.

2.2.3 Negligence

The distinction in the law of delict that would apply to the nurse would be where injury to personality results. This would include deliberate and/or unlawful damage to name, honour or physical wellbeing, or omission to act positively on available information. When considering such a claim, the court considers society's perceptions of justice, fairness, reasonableness, good faith and public policy against the nature of the agreement or relationship between the parties (Verschoor *et al.*, 1997). Motive, nature and extent of the damage, and effort to prevent the damage are other considerations assessed to establish whether the interests of the aggrieved party were damaged, reasonably or not. Compensation will be awarded when negligence has caused physical suffering or emotional shock.

Negligence is the civil action which nurses may face if a patient becomes injured while under their care. There is a duty of care that results from the nurse-patient relationship; this can be seen as the nurse considering the patient's interests and wishes in the context of every intervention she or he performs for that patient. A standard of care is required in order for the patient to achieve an outcome, whether this would be a state of health or dignified death. This standard is determined by applying the 'reasonable person test'. Actions can be regarded as negligent when the doer fails the reasonable person test, which is applied according to the following questions:

- Could the possibility have been reasonably foreseen that the conduct would harm another's person or property and cause unlawful damage?
- Could reasonable steps have been taken to avoid or prevent the damage?

If answers to the posed questions are in the positive, then the doer's actions are negligent.

The reasonable person is a fictitious being created out of the characteristics required by a society or part of a society in their behaviour to one another. In the case of a critical care nurse, these characteristics are coloured by her or his having a reasonable degree

of professional expertise in the field of critical care nursing. Due to her or his training and registration, the law demands a higher level of skill, care and practice than that of a generalist nurse (Searle & Pera, 1995; Verschoor *et al.*, 1997). It must be considered that the reasonable nurse is not required to have the highest possible degree of expertise, but rather the prevailing level of expertise in the profession and under the same circumstances as when the incident in question took place (Searle & Pera, 1995; Verschoor *et al.*, 1997). A more experienced critical care nurse would be expected to have more developed skill and judgement than a newly qualified critical care nurse. The critical care nurse must take reasonable care to avoid acts or omissions, which could reasonably have been foreseen to cause harm or damage to her patients. The court would utilise this reasonable critical care nurse test along with accepted standards of care in the hospital and healthcare industry.

A second area to be considered here is that negligence applies where a nurse purports to be skilled in an area for which she or he does not possess the necessary training, skills or expertise (Verschoor *et al.*, 1997). The law does make exceptions in special circumstances, such as in emergency situations or when following a direct or official order. This can become important particularly in private hospitals where the critical care nurse accepts responsibility that should rest on the medical doctor. The nurse performing interventions for which she or he has no proof of training or competence would fall into this category of negligent practice. It must also be accepted that ignorance or incompetence will not be regarded as an excuse for interventions that go wrong if the nurse is unable to prove her ability or reasons for performing the action.

Areas of interest that have been regarded as special circumstances were noted in the above paragraph. Due to these having a significant impact on the critical care nurse in private practice, they will be discussed in more detail.

2.2.3.1 Emergency situations

These are regarded as situations in which immediate intervention is required on the part of the nurse to save a life or protect the patient's interests. Searle and Pera (1995) argue that it is an ethical and legal obligation of the nurse to do what is required in an emergency situation within the limits of her or his knowledge and skill. The nurse should intervene in the emergency situation to the best of her or his ability as a trained

specialist professional nurse. If these requirements are met, then delictual liability is avoided.

In a situation where consent cannot be obtained for an emergency intervention, the nurse would be regarded as acting as an agent of necessity. Here it must be shown that the action of the nurse is absolutely needed and in the patient's interests, that there are not greater losses than necessary, the nurse does not gain personally from the intervention and she or he is not acting against the intentions of the patient (Verschoor *et al.*, 1997).

This does raise the question what an emergency situation in critical care practice would be and what would be regarded as non-emergency practice.

2.2.3.2 Executing a direct or official order

Activities resulting from a direct or official order have grounds for justification in removing delictual liability. According to Verschoor *et al.* (1997), three requirements must be met for a valid ground of justification:

- the order must come from a person who is by rights in a position of authority over the doer;
- the doer must be under a legal obligation to obey the order; and
- the doer must inflict no more harm than necessary in carrying out the order.

The questions raised here are complex when regarded in the environment of the critical care unit. In private practice, the nurse works for her employing body and doctors are regarded as consumers of the service (very seldom do doctors have any direct, managerial functions in private critical care units) and defining the position of authority becomes complex. Searle and Pera (1993) in discussing the functions of the nurse notes that the dependant function of the nurse rests in the law which enables her to practice and not in the doctor giving permission for her to act. The critical care nurse thus functions from her own position of authority in carrying out an order and her actions must therefore always focus on providing for the best interests of the patient. The relationship between doctor and nurse can also only be defined within each individual patient-care profile and then again in each set of circumstances in that profile. Any

decision by the nurse to act on an order from the doctor, whether in an emergency or not, can only be based on what she or he knows to be in that patient's interests.

The nurse is under a legal obligation to carry out orders that are in the best interests of her or his patient. However, the critical care nurse must not carry out any order that is manifestly unlawful (for example, the administration of medication to achieve an end for which that medication is not intended). If an order is unlawful, but the doer has justifiable grounds for performing the act and it is deemed not unreasonable in those circumstances, then liability may be avoided, as may occur in an emergency situation. Critical care nurses have a responsibility to question unlawful orders and record this with the responses obtained from the generator of the order to be able to prove that they recognised the unlawfulness of the order and therefore had reasonable grounds to refuse to comply with it. Again, the reasonable critical care nurse test would decide each situation on its circumstances.

Proving negligence therefore rests on the following:

- that a duty of care existed between the parties
- that the standard of care rendered was not appropriate
- that damage to personality (person or emotion) occurred that was reasonably foreseeable or preventable
- that there was a link between the damage caused and the standard of care provided

These are the areas that have the most impact on the critical care nurse's practice.

The nurse working in a private critical care environment does not act exclusively in her role as independent practitioner. This state of function is influenced by the employer-employee contract, as well as the policies and procedures of the employing hospital group.

2.2.4 Employer-employee responsibility

When a patient is admitted to a critical care unit, an agreement exists between the hospital and the patient. The patient expects a standard of care to be delivered which is in accordance with the hospital and healthcare industry standards. The standard of care is also measured against legal and professional requirements of the practitioner. Should the patient consider that the agreement is breached, he can institute a claim of negligence against the hospital and the nurse. Should the hospital be found guilty of negligent practices, the institution could take civil action against the nurse.

Vicarious liability exists where the employer is held responsible for the actions of the employee (in the course of the employee's duties) despite the employer not being directly involved in or authorising the action. There are three criteria which are considered when a decision on vicarious liability is to be made (Verschoor *et al.*, 1997), namely:

- an employer-employee relationship existed at the time of the incident;
- the employee committed the incident in the course of her or his normal duties as defined in her service contract; and
- the employee has committed an offence against the law.

The critical care nurse does therefore have legal responsibilities towards the employer. Searle and Pera (1995) also accept these responsibilities and include the following that can be considered particularly valid in the critical care environment. According to these authors, the critical care nurse has

- a duty to remain professionally competent, which requires that she or he remain informed of new developments in her or his field of practice and ensures that she or he is able to safely carry out nursing interventions that technological or clinical development create;
- a responsibility to attain competence in any new skill required and be able to perform the intervention in a competent manner with due care and regard for patient safety;
- to remain responsible for the patient's name, person and property;

- to also carry out her role and allocated functions within the boundaries (policy, procedure and standards) set by the employer;
- to be a role model for the employer, her colleagues and the patient, and she or he should identify and take steps to correct areas that may be in conflict with professional boundaries in critical care nursing;
- to have due regard for the equipment and stock of the employer and for what the patient is charged;
- to be responsible for the care she or he delegates to her or his colleagues; and
- to co-operate with the members of the multidisciplinary team.

Searle and Pera (1995) furthermore indicate that the employer also has responsibilities towards the employee. These generally focus on enabling the nurse to practice within legal and professional parameters.

The employer therefore should

- provide a job description and orientation to ensure that the critical care nurse knows what is expected from her or him and is given the opportunity to become familiar with the employer's policy and standards;
- ensure that the workload is manageable and that the employee is treated justly and fairly; and
- provide opportunity for professional development and recognise the nurse as a professional and person in her or his own right.

The critical care nurse's obligations to her or his employer define the responsibility placed on her or him to provide a service to the patients in her or his care. The hospital must develop written standards to provide guidelines within which the critical care nurse can utilise her or his knowledge and skills to provide care to the patient. The critical care nurse must participate in the development of these standards to ensure that

professional and business concerns are combined to provide a safe environment in which skilled nursing care can be delivered. The employer must make it possible for the nurse to carry out her or his duties and responsibilities in a safe and ethically correct manner. This includes a responsibility of the employer to create an environment with appropriate human and technical resources to allow for a manageable workload and maintenance of acceptable standards of care (Searle & Pera, 1993).

In order to limit the potential for possible negligent activity, the employer thus has a responsibility to ensure that the following are in place:

- Policy documents/practice guidelines/protocols: These documents should describe the role and function of the registered nurse in situations that may arise during the care of patients in a guided, systematic way (Searle & Pera, 1995). The registered nurse refers to these to guide her or his management of situations affecting patient care. Some hospitals extend the policy documents to include nursing procedure documents, where the hospital group sets the standards expected during performance of these procedures on a patient. Examples include policies on how to handle the media, how various equipment should be maintained, how to manage a disaster, and how to manage patients' personal belongings.
- Job description and orientation programme: This enables the nurse to have a thorough understanding of the requirements of her or his position.
- Continuing education programme: Searle and Pera (1993) state that the employer should enable the practitioner to advance professionally by providing continuing education and opportunities for promotion.
- External audit (company and independent): This enables the hospital as well as the healthcare group to evaluate the practices against national and international standards.
- Record unsatisfactory conditions: Every registered nurse can expect their employer to deal justly with complaints put forward with respect to unmanageable workloads and unreasonable working environments.

The responsibilities of both the employer and employee are focussed towards providing a safe, efficient, cost effective and comprehensive service to the patient. Law thus protects the patient, employer and employee.

2.3 Professional framework

2.3.1 Professional registration

State regulation of individuals practising a profession has been in existence for centuries. Searle (2004) discusses attempts by the church in the thirteenth century to control the practice of midwifery. At the crux of this is the state's mandate to protect the public. This is done by ensuring that persons claiming to practice a particular profession are required to be registered through a regulating authority charged with qualifying the credentials of each practitioner. Once the practitioner has proven to have the academic, practical and ethical basis on which to practice the chosen profession, the regulating authority registers the practitioner. All individuals practicing healthcare in South Africa are registered through regulating authorities, for the nursing profession this is the South African Nursing Council.

Professional registration of nurses is a worldwide phenomenon that is actively supported by institutions such as the International Council of Nurses (ICN) and the World Health Organisation. The aim of registration is to protect the public by ensuring the adequate preparation of practitioners calling themselves nurses. The ICN views registration additionally as a means of protecting the title 'Nurse'. In a position statement, the ICN in 1998 stated that by reserving the title of 'nurse' for those who meet the legal standards required, those receiving healthcare and those employing nurses will know they are dealing with a legally qualified nurse as distinguished from other care providers. The statement goes further to point out that those using the title of nurse are individually responsible and accountable for their actions, and are required to adhere to professional codes of practice and ethics. This applies to those who achieve additional qualifications in their chosen nursing specialisation, such as critical care nursing. Application of professional practice codes to the environment of specialisation and accepting accountability for one's actions are essential to maintain the practice integrity required by registration as a critical care nurse. In order to fully understand the

responsibility and accountability attached to practice in a specialised environment, the critical care nurse must be able to define her or his practice, its parameters and knowledge requirements in order to be able to practice safe, competent, quality nursing care.

2.3.2 Regulations

There are various regulations that have an impact on the practice of the critical care nurse that need to be explored.

2.3.2.1 Regulations relating to the Scope of Practice of Persons who are Registered or Enrolled under the Nursing Act 1978 (R2598 of 30 November 1984 as amended)

The Regulations (R2598 of 30 November 1984) relating to the scope of practice of persons who are registered or enrolled under the Nursing Act of 1978 authorises the Minister of Health to define the scope of a nurse's practice in any context in which nursing care is delivered in South Africa. This includes the critical care environment.

“Regulation of nursing/midwifery is about public welfare through improving of standards of practice and care of patients by ensuring that those who nurse or practice midwifery have the knowledge, skills and ethical preparation through appropriate education to provide the quality care the nation needs” (Searle 2004::6).

South Africa is a world leader in obtaining state registration for nurses under the Medical and Pharmacy Act (Act No. 34 of 1891). This law required that, amongst other practitioners, qualified nurses could be registered and that registration was voluntary (Searle, 2004). Specialisation in nursing and need for further study was recognised in 1928 in the Medical Dental and Pharmacy Act (Act No. 13 of 1928); again a unique provision as statutory recognition of additional qualifications in nursing lags behind in many other countries (Searle, 2004).

The Nursing Act No. 45 of 1944 passed statutory control of nursing into the hands of nurses. The South African Nursing Council was established and accorded similar powers to those of the Medical Council, creating an equal status of the two councils. In 1972, an amendment to the Nursing Act (Act No. 50 of 1972) determined that

registration of all persons undertaking nursing in any form for gain would be mandatory (Searle, 2004).

The Nursing Act No. 50, 1978 (as amended), is the present law that governs the nursing profession in South Africa. The act provides for the establishment of the new South African Nursing Council (Act No.19 of 1997), which regulates nursing practice in this country. A new nursing act is in the process of being written and could potentially be ratified into law in 2005.

The Nursing Council is an autonomous, financially independent, statutory body. The Council fulfils many roles in the context of South African nursing. These include promotion of health standards, the development and control of training and acting as an advisor to the minister of health on matters integral to the development, maintenance and function of the nursing profession in South Africa. The Council has a responsibility to the public of the country to ensure that a competent, safe, compassionate and ethical practitioner provides nursing care. To this end, the Council must provide the qualified practitioner with professional guidelines for what is deemed to be the acceptable standard of care in South African nursing in every context in which nursing care is delivered.

In order to develop and simultaneously to protect the nursing profession and fulfil its role in South African healthcare, the Council promulgated a set of regulations known as the Scope of Practice (R2598). These regulations were based on research into the "phenomenon of nursing practice" (Searle, 2004:117), which was done in the period 1950 to 1960. The research developed principles that Searle regards as essential to defining a scope of practice. The principles then guided the development of the regulations that formalised the scope of nursing practice in South Africa. It is intended that these regulations relating to the Scope of Practice of a registered nurse (No R 2598 of 30 November 1984) apply to any registered nurse working in any form of healthcare environment. It is therefore the interpretation of these regulations by the registered critical care nurse that should guide her or his daily nursing practice. These same regulations must provide the professional-legal protection for the daily practice of a registered critical care nurse. The regulations need to be interpreted in a manner that allows the critical care nurse the flexibility that is needed in caring for her or his critically ill patient. If the Scope of Practice (R2598 of 30 November 1984) does not allow for

broad and flexible interpretation, the specialist critical care practitioner will be limited in her or his professional and legal duty to care for the patient.

2.3.2.2 Other regulations

Further regulations that directly influence the critical care environment focus on the training requirements for registration as a critical care nurse, as well as on acts or omissions of practice which can lead to disciplinary action and awarding of penalties. These penalties are circumscribed by the Nursing Act No. 50 1978 as amended.

2.3.2.2.1 Rules setting out the acts and omissions in respect of which the Council may take disciplinary steps (No.R.387 of 1985 as amended)

These regulations define what the Council regards as unprofessional behaviour. The regulations cover a diverse practice base, but provide the critical care nurse with defined professional guidelines from which to judge her or his own professional behaviour in the critical care environment. Penalties can be imposed on a nurse found guilty of misconduct by a disciplinary hearing of the council. This may range from cautioning the nurse to removal of her or his name from the register, effectively disallowing further nursing practice by the guilty individual.

2.3.2.2.2 Regulations relating to the course in Clinical Nursing Science leading to registration of an additional qualification (No. R. 212 as amended)

These regulations provide the South African Nursing Council's requirements for a nursing school to provide education leading to an additional qualification. The regulations also govern the curriculum with reference to the course curriculum and course content. Specifically, the South African Nursing Council requires in 6(1) of the regulation that the curriculum of a course is compiled to, *inter alia*, develop a student's skill and knowledge in:

- applying and pioneering a systematic approach to the nursing of man in the various phases of life at any point along the health/sickness continuum, in situations inside and outside the hospital;

- maintaining ethical codes of the profession and practising within the provisions of the appropriate legislation; and
- defining and accepting responsibility for independent nursing practice.

The South African Nursing Council therefore requires that on completion of a clinical nursing course in critical care nursing the qualified (and subsequently registered) critical care nurse is able to apply professional and legal parameters to her or his practice.

The registered critical care nurse is also required therefore, as a consequence of this regulation, to be able to apply the knowledge gained within the field of study (i.e. critical care nursing) to the care of a critically ill patient. The regulation requires that she or he act as an independent practitioner accepting the responsibility attached to this role. In order for the practitioner to be able to do the above, the regulations related to her or his scope of practice must allow the breadth and flexibility of interpretation that may be required in the care of the critically ill. If this does not occur, the scope of practice regulation would be limiting the nurse's ability to fulfil the requirements of No R 212 as amended by No R 74 of January 1997.

2.4 Perspectives on specialisation in nursing

2.4.1 International perspective

It is difficult to locate consensus amongst various international countries, and in many cases even within countries, with respect to how they define the role of the critical care nurse. There are numerous terms used to label a nurse who has experience in a specialist field such as critical care nursing, but on further investigation it is apparent that the same term may be defined differently.

Terms such as expert, specialist, advanced practitioner, nurse practitioner and acute care nurse practitioner (Ball, 1997; Barton, Thome & Hoptroff, 1999; Kleinpell, 2005; Neenan, 1997; Whyte, 2000) are used interchangeably and contradict each other. The overriding impression created by the literature published on nursing specialisation is that this is a subject that has been and continues to be debated by interested (and in

some cases apparently threatened) parties from many different perspectives and that consensus may still be far off.

Barton *et al.* (1999) confirm this absence of universal agreement, but is of the opinion that there are common themes emerging from the debate allowing a broad role definition of the nurse practitioner. In the paper by Barton *et al.*, McLoughlin's (1992) view of the advanced practitioner describes a nurse with a graduate degree in nursing who demonstrates high-level skills in assessment, diagnosis and treatment of complex responses to health needs by individuals, families and communities. The description further comments on the integration of education, research, management, leadership and consultation by the advanced practice nurse into this role; as well as functioning in a collegial relationship with all practitioners in the healthcare environment. Kleinpell (2005) states that this practitioner provides nursing care to patients with complex acute, critical and chronic health conditions.

There is considerable reference to the discomfort expressed by many nurses over the so-called mini-doctor role. Barton's (1999) paper as well as others (Carver, 1998; Neenan, 1997) note that the nurse practitioner is seen to be collecting tasks rejected by junior doctors rather than truly expanding her or his nursing skills. Barton *et al.* (1999) suggest the use of five core elements described by Koch and Pazaki to enable progress in the debate around nurse practitioners; these are identified as

- service demand
- nature of the role undertaken
- education required to fulfil such a role
- need for evaluation and quality control
- need for controlling legislation

Literature has grappled with the application of the 'advanced practitioner' terminology to the critical care nurse. Again the concern of the nurse gaining prestige by adopting medically-based technical skills and knowledge while leaving nursing care to health-care assistants is highlighted. Neenan (1997) infers that this creates potential for the neglect of actual nursing development and could enable hospital management to diminish the value and influence of nursing within the health service..

The results from a study by Carver (1998) concerning the perceptions of registered nurses working in a cardiology unit of role expansion identified three issues raised by the respondents. The first is the acceptance by nurses of tasks that doctors no longer feel the need to practice (Carver identifies this as nurses once again becoming the doctor's 'handmaiden'). The second issue is that nurses are taking on tasks that have no bearing on the improvement of patient care or that will dilute nursing skills in the face of increased workload. In a more positive vein, the third issue identified an implied degree of freedom when the nurse was able to perform skills in which they were trained in response to patient need. Carver (1998) goes on to confirm that clarity about the so-called expanded nursing role in the United Kingdom must be sought in order to ensure that patient care is not compromised or fragmented.

The acquisition of greater knowledge and skills by the critical care nurse is seen as beneficial to the patient, provided this is performed in the interests of patient care and nursing. The advanced practitioner in critical care nursing should undertake this role from a nursing, patient-centred perspective acting as role models to nursing colleagues, demonstrating care and compassion and communicating with patients as active participants in their treatment (Neenan, 1997). In support of this perspective, Ball (1997) suggests that the question to be asked when expanding the technical role of the critical care nurse is whether expansion of the role will lead to improved and less fragmented care for the patient and how this will be demonstrated.

Economic concerns are also usually raised in these discussions as the salaries paid to nurses form a significant part of any healthcare budget process. In Woodrow (2000:4), Wilkinson is cited concerning the importance of critical care nurses clarifying their roles and value in healthcare related to caring for patients and their relatives.

A second concern arising from the literature is the need for regulation of specialisation. This is supported by the International Council of Nurses (ICN) which plays an important role in providing data, advice and consultation to nursing organisations in all aspects of regulation of the nursing profession.

More specifically, Whyte (2000) notes that the ICN had recognised by the 1980s that the proliferation of nursing specialities and the regulation of their development was an important international issue. To deal with this in an orderly manner, the ICN proposed a nursing specialisation schema designed to encourage minimum standards for

education, practice and competence and to provide a regulatory mechanism and deliberate resource planning. This then supports the need for critical care nurses to identify their role in patient care management and to ensure that regulation of their practice comes from themselves and not from external role players who have historically influenced and possibly subtly directed the scope of practice within which a nurse must then function (Bowler & Mallik, 1998). The concern that critical care nurses must decide what their role and scope in patient care involve is repeated by other authors. Neenan (1997) states that acquiescing to others' plans does little to promote a positive image of nurses as significant or influential in the future of healthcare provision, and Carver emphasises that the role of the nurse has historically adapted to the changing needs of patients and that this patient focus must continue to drive further development of the critical care nursing role – not the whims and desires of another profession.

The various nursing regulatory bodies internationally have also identified the need for nursing practice development in line with patient needs. In order to enable the nurses of the country to practice their profession in response to the changing and challenging needs of healthcare, many of the regulating councils have reviewed the scope of nursing practice regulations or guidelines published. The new regulations or guidelines have not been written in terms of skills or tasks, rather a descriptive method of encapsulating the nurse's role and function related to healthcare is provided. This approach allows the nurse in different circumstances of patient care delivery to provide nursing care appropriate to patient need. However, each description is guarded by the requirement that the nurse will always remain accountable for his/her actions. In the United Kingdom, these have included principles on which a nurse may adjust her or his scope of practice. The principles generally include consideration of the following:

- the adjusted practice must be patient-centred;
- the nurse must achieve and maintain a level of knowledge, skill and competence commensurate to respond to the patient's need;
- the adjusted practice should not fragment or compromise existing professional practice; and

- the nurse remains accountable for all aspects of professional practice (UKCC, 1992).

2.4.2 South African perspective

Searle and Pera (1995) argue that specialisation encourages the intellectual growth of the nurse and leads to increased competence, increasing the ability of the practitioner in all aspects of patient care.

The South African Nursing Council has recognised the role of the clinical specialist nurse. During 1997, the Practice Standards Committee began consultations with specialist societies and educational institutions offering post-basic programmes to develop regulations for the scope of a specialist nursing practitioner.

This committee defined the “Clinical Specialist” as

a nurse who has chosen a specific clinical area as a career path through experience and education. In this area she or he is an expert clinician, programme manager, educator, consultant and researcher. She or he is licensed by the regulatory body for an expanded role, based on recognised qualification, and practices in this specific area (South African Nursing Council, 1997)).

In the same document, the principles underlying the need for specialists include the advancement of nursing science and technology; as well as the recognition for expertise in a specific nursing field.

Thus the regulating body has acknowledged a need for further investigation of the clinical specialist’s scope of practice, which would include the registered critical care nurse. The discussion around review of the present scope of practice continues with the intention to consider the scope of the clinical specialist once the foundation scope of practice has been finalised and accepted. The South African Nursing Council appears to be following international trends in moving further from what can be perceived to be an inflexible set of rules to a charter. The Draft Charter of Nursing Practice (SANC 28 September 2004) describes a comprehensive approach to nursing practice in order to align this with changes in healthcare policy and legislation.

2.5 Patient-focused care

The critical care nurse must have as her or his focus the goal of delivering of quality, patient-focused nursing care.

Patient care evolves out of the relationship created between a nurse and a patient. This relationship allows the nurse or the patient to identify a need that the nurse must then translate into a plan of care, which must be translated into the required activities to meet the identified patient need. These activities may include administrative tasks, technical skills, psychosocial support, physiological interventions and management assistance. The nurse develops this plan in the context of the 'whole environment', namely with information from and about her or his patient, nursing and allied health colleagues, hospital policy, technical support, etc.

Whatever combinations of activities are required to meet the patient's needs, the nurse maintains the focus of her or his intervention on the patient. Woodrow (2000:6-7) reinforces this in saying that nurses do not treat a problem or set of problems. A fundamental role of a nurse is rather to be with and for the patient, because by "recognising both the physical and psychological needs of patients, nurses can add a humane, holistic perspective into their care." Nel (1993:64) supports this from a South African point of view: "*Dit is dus noodsaaklik dat die intensiewe verpleegkundige nie slegs die siek pasiënt se ernstig sieke liggaam sal verpleeg nie, maar dat sy ook bewus sal wees van sy psige en gees en ook daaraan aandag sal gee.*"

2.5.1 Critical care nursing activities

Nursing a critically ill patient is complex and requires that the nurse is able to approach patient care in a systematic manner. This is to ensure that the appropriate information is first collected and then understood in the correct context of the patient, and that there is then the appropriate response and activities implemented in order to provide quality nursing care. A record of this care is required as proof that the interventions took place.

The systematic consideration of all these above-mentioned aspects is known as the scientific process of nursing. The scientific process of nursing is seen to include assessment of a patient, diagnosis of a nursing care need, planning care to attend to the patient's need, implementation and evaluation of the plan and the patient's response. The critical care nurse makes use of all these activities in the care of her or his patient. Nel (1993) supports the use of this process in critical care nursing where it is included in the group identified by Nel as pertaining to the clinical functions of a critical care nurse. Patient assessment and monitoring is included by Nel (1993) in the assessment phase of the nursing process. Scribante *et al.* (1995) identify the use of the nursing process as part of the critical care nurse's scope of practice.

Critical care nurses are often accused by their colleagues of forgetting the basics of patient care in favour of applying technology or manipulating various patient management strategies. Woodrow (2000) contends that, while technology provides valuable means of monitoring and treatment, it should not become a substitute for care. The researcher is of the opinion that it is in the care of the critically ill patient that implementing what is generally termed 'basic needs' care (rather terming this 'essential care' gives these activities more appropriate priority) that the critical care nurse comes into her or his own. With reference to hygiene, Scribante *et al.* (1995) argue that, although this is a basic health need, it can only be met by a highly skilled critical care nurse with the necessary insight into the nature of each patient's particular condition. They go further to state that achieving essential needs related to sleep, rest and physical comfort is difficult in the technological environment of the critical care unit, and this requires the abilities and activity of an empathetic critical care nurse. Woodrow (2000:7) contends that the intrinsic needs of patients are derived from the patient's own physiological deficits including what he terms "activities of living – communication, comfort, freedom from pain – meeting these needs is fundamental to nursing".

Scribante *et al.* (1995:440) points out that "[t]he bodily regulatory mechanisms that most critical care patients need to maintain, regardless of their underlying disease, are homeostasis of fluid, cardiovascular, respiratory, renal; and gastro-intestinal systems, and enhancement of natural defence mechanisms." The nursing care of a critically ill patient places much of its focus on the achievement and maintenance of homeostasis. Once a patient need has been identified from the assessment of a patient and a plan of care has been compiled, it is the implementation of these activities that intend to

achieve improved homeostasis, or at the very least the early opportunity to identify deterioration. The ongoing evaluation of a patient informs the nurse whether the patient is responding as needed to the therapy implemented. Nel (1993:74) contends that "*die kuns van intensiewe verpleegkunde is hoofsaaklik in die implementeringsfase gesetel.*" Nel further argues that it is during this phase that nursing and medical prescriptions are implemented with continuous evaluation of the activities related to this. Scribante *et al.* (1995) confirm the many activities related to the achievement and maintenance of homeostasis as part of the critical care nurse's function. Some of these include artificial airway support and ventilation, fluid balance assessment and maintenance, wound care, nutritional support, assisting with interventions and the activities related to maintenance of bodily regulatory mechanisms.

The environment in which the critically ill patient is nursed must lend itself to promoting physical and mental health (SANC No. R. 2598 as amended). This is called a therapeutic environment and encompasses activities related to the physical environment, management and ethical considerations. The therapeutic environment is explained by Naudé, Meyer and Van Niekerk (2000) as being an environment where patients are free from medico-legal hazards, nosocomial infections and are nursed in a clean and comfortable environment. These authors extend this explanation to include nursing staff who are professional, engaging in co-operative relationships with other members of the multidisciplinary team; nurses who are knowledgeable, skilled and able to deliver a high standard of nursing care. Searle and Pera (1995) support this by including all activities relating to the management of the patient's environment. Nel (1993) identifies the activities related to education and administration (management) as important functions of the critical care nurse. The education function extends to colleagues, patients and families, and includes patient advocacy.

Healthcare raises ethical dilemmas that seldom have absolute answers; critical care adds greater focus and poignancy to these ethical dilemmas (Woodrow, 2000). The manner in which the critical care nurse accepts her or his role in identifying and attending to ethical dilemmas will influence the therapeutic environment.

The activities of the critical care nurse are diverse, complex and complicated to match the diverse, complex and complicated needs of the critically ill patient. A systematic approach to providing nursing care utilising the scientific approach will assist the critical care nurse in providing for the essential healthcare needs of the patient. Activities

focusing on achieving and maintaining homeostasis provide the backbone of patient care, while the influence of the unit surroundings is managed to provide the optimal therapeutic environment in which a patient is assisted to health or a dignified death.

2.6 Summary

The critical care nurse practices her or his profession as described by the needs of her or his patient, but should always act within the legal and professional parameters prescribed in laws and regulations. The expectations of the public, employers and South African Nursing Council related to the knowledge, skill and care of the critical care nurse circumscribe the range of activities this professional requires. However, in order to meet these expectations, the regulations that relate to critical care nursing practice must be flexible and yet provide a safe environment for the patient, nurse and employer. It is crucial that the critical care nursing fraternity interpret their scope of practice to ensure that the above requirements are met.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

In this section, the methodology used to undertake the research project will be described.

According to De Vos, Strydom, Fouché and Delport (2000), it is important that the research methodology be described comprehensively so that the reader develops confidence in the methods used.

3.2 Research design

The research design is the plan against which the research is to be carried out.

In De Vos *et al.* (2000), the reference to Rubin and Babbie's description of the second connotation of the term 'research design' identifies this as referring to all the decisions made in planning a study; which include the overall design, sampling, sources, data collection procedures, measurement and analysis issues. Brink (1996) indicates that the research design flows from the research question and specific purpose of the study.

For the purposes of this study, an exploratory, non-experimental, descriptive research design was utilised. This method was chosen as most appropriate to achieve the goals of the study. As both qualitative and quantitative data were collected for this study, triangulation of the data assisted to make the study more comprehensive (De Vos *et al.* 2000).

Babbie and Mouton (2002) define an exploratory approach as a way of providing the researcher with a basic familiarity with a topic, which is useful when examining a new interest. This type of research design assists the researcher to gain insight into and develop comprehension around the subject studied. Babbie and Mouton (2002) quote

Selltiz *et al.* as emphasising that a survey of people who have had practical experience of the problem to be studied is an appropriate methodology for an exploratory research design. There have been few studies performed in South Africa that have had the Scope of Practice of the critical care nurse as their focus. No studies have focussed specifically on the registered critical care nurse in the private healthcare industry as far as the researcher was able to determine. This means that the topic to be researched is a new field and as such an exploratory design will assist in providing insight and understanding into this.

A non-experimental approach allows the researcher to explore and explain the relationships between phenomena that are observed in the natural environment (Brink 1996). There is no manipulation of variables, nor is the setting of the research controlled. The phenomena studied in this research were the opinions of a group of registered critical care nurses working in the private healthcare industry related to the interpretation of their scope of practice. The researcher intended to describe the collective opinion of these nurses about identified common activities in the care of a critically ill patient and the Scope of Practice (R2598 of 30/11/1984 as amended) to achieve the goals of the study.

A descriptive approach to research focuses on providing a description of the relationships between variables or phenomena. According to De Vos *et al.* (2000), the researcher begins with a well-defined subject and conducts research to describe it accurately. Descriptive research may be qualitative or quantitative in nature (De Vos *et al.*, 2000). In this study, the subject is the Scope of Practice (R2598 of 30/11/1984 as amended). The researcher utilised a survey to identify and then describe the opinion of registered critical care nurses related to the Scope of Practice (R2598 of 30/11/1984 as amended) and their interpretation of this in their daily practice.

According to De Vos *et al.* (2002:342), "triangulation of method means mixing qualitative and quantitative styles of research and data." Triangulation allows the researcher to use more than one source of data to provide insight into a phenomenon. The researcher chose to combine quantitative and qualitative aspects in this study to achieve greater insight into the subject. The researcher utilised literature sources, quantitative

representation of the opinion of the sample related to critical care nursing activities and qualitative analysis of how the sample defines the scope of practice relative to their daily activities. By combining the viewpoints obtained from these various sources, the researcher aimed to achieve a more comprehensive, valid and reliable study.

3.3 Population and sampling

Brink (1996) refers to "sampling as a process of selecting the sample from a population in order to obtain information regarding a phenomenon in a way that represents the population of interest". De Vos *et al.* (2000) state that sampling is done to increase feasibility, cost-effectiveness, accuracy and manageability of the prospective survey.

3.3.1 Population

The population refers to the elements (individuals, objects, subjects, events and substances) fulfilling the requirements/criteria to be included in the study (Babbie & Mouton, 2002).

The population for the purpose of this study was

- all South African registered critical care nurses working in critical care units; and
- in private hospitals in the Western Cape province.

3.3.2 Sampling

Sampling defines the process for selecting a group of people, events, behaviours or other elements with which to conduct the study (Burns & Grove, 2003). There are mainly two types of sampling methods available, namely probability and non-probability sampling.

The private hospitals with adult intensive care units within a radius of approximately 100 km from Cape Town in the Western Cape were conveniently identified. Other private hospitals and regions were not included due to financial and time restrictions. These were purposefully selected because of time and financial constraints and the facilitation of accessibility for the researcher to the hospitals and units. Neonatal and paediatric intensive care units were excluded because a different body of knowledge and different clinical skill sets are used in the care of critically ill neonates. There are also no specialised paediatric critical care units in the private sector in the identified area.

Nineteen (19) critical care units in hospitals belonging to three (3) private healthcare groups were thus identified by the researcher and included in the study. The researcher was of the opinion that the application of the parameters of the scope of practice should be common across various hospitals.

Within the identified hospitals and units, the critical care qualified nursing staff taking part in the study were selected through non-probability sampling. This form of sampling is regarded as more convenient and economical, but increases the chances that the sample may not accurately represent the population (Brink, 1996). This type of sampling also may limit the generalisation of the results. In this study, the researcher intended to describe a specific phenomenon related to a subsection of the critical care nursing workforce. Respondents had to be registered critical care nurses with at least one year of post-specialist qualification experience. The researcher set these minimum criteria because interpreting and applying the scope of practice in a meaningful manner in the stressful environment of the critical care unit require some experience in the role of registered critical care nurse.

All the critical care qualified nurses meeting the minimum criteria set and practicing in the units during the research period were included in the sample. The total number of registered critical care nurses employed by the 19 hospitals at the time of the research was 150. A total of 110 nurses were however practicing at any given time due to vacation, sick leave and maternity leave, for example. The sample thus consisted of 110

critical care qualified nurses meeting the set criteria, or 73,3% of the identified population.

According to De Vos *et al.* (2000), a population of between 100 to 200 should have a sample size of between 32% to 45%, which indicates that the researcher's sample is appropriate.

3.4 Data collection

3.4.1 Instrument

A questionnaire was developed in order to collect data. As the research design is that of a descriptive survey, a questionnaire is an accepted form of data collection (Brink, 1996).

Brink (1996) defines the questionnaire as a self-report instrument where the respondent writes her or his answers in response to printed questions on a document. This allows the researcher to find out what the respondents' opinion is in relation to the research question asked. The researcher selected this form of data-collection tool because she was of the opinion that this would reveal the most objective form of data.

Brink (1996) suggests that the researcher pay careful attention to the development or construction of the questionnaire to ensure the questionnaire meets the research objectives, obtains the most complete and accurate information possible, and does this within a reasonable time and resource limit. Questionnaires were available in English and Afrikaans to limit the effect of bias related to language (see Addenda A and B).

The questionnaire consisted of the following three sections:

- Section 1: Demographic data
- Section 2: Activities of the critical care nurse

- Section 3: Respondent's own definition of the Scope of Practice in relation to her/his practice.

In section 1, data were collected regarding the respondent's type of qualifications, years of experience in the critical care environment, leadership positions and the type of unit she or he worked in. This data allowed the researcher to ensure the sample fulfilled the criteria set for inclusion in the sample.

Section 2 included a list of activities that are performed regularly in the care of critically ill patients. The activities were identified through the researcher's experience and observation of critical care nursing over six years as a registered critical care nurse working in the private healthcare industry. These activities were added to or confirmed by conversations with peers regarding the research topic and in the literature related to critical care nursing.

The activities were listed in table format with particular activities of similar nature grouped together, for example activities mainly related to airway maintenance and ventilation were kept together. The activities were not manipulated to be placed in orders of difficulty or likelihood of inclusion in the scope of practice. Where appropriate, the main activity was expanded into specific components. This was done to provide more clarity on the actual opinion of the critical care nurse related to each aspect or alternate of the activity. For example, 'initiate oxygen therapy' was identified as a main activity and was then expanded to options of oxygen therapy via nasal cannulae, face mask, CPAP therapy, resuscitation bag and airway. Some activities were rephrased later in the questionnaire to again clarify opinion related to these activities. These activities included those related to the pulmonary artery catheter and drug administration because they may cause controversy amongst critical care nurses.

Description of each activity was kept as short and pointed as possible without losing specificity in the description. Specific words used in the professional language of critical care nurses were used to limit ambiguity. Only one activity was described per line.

The respondents were provided with a three-point Likert scale where they placed a tick mark in the column to indicate their opinion related to each activity and the Scope of Practice (No.R. 2598 of 30/11/1984). The options offered for the Likert scale were

- Activity is covered by the Scope of Practice (No.R. 2598 of 30/11/1984)
- Activity is not covered by the Scope of Practice (No.R. 2598 of 30/11/1984), but is performed by the critical care nurse
- Activity is not a nursing function

Respondents choosing the third (3) option were asked to indicate in the last column (column 4) who they think should fulfil the function they regarded as not a nurse's responsibility. This was done in order to gain clarity on who should perform the activities the critical care nurses indicated as falling outside their professional parameters.

This section of the questionnaire allowed the researcher to differentiate between activities that respondents considered within the parameters of critical care nursing practice, activities that seemed to be in the 'grey area' (option 2) requiring clarification and activities that should not be performed by the critical care nurse.

The third section of the questionnaire was posed as an open-ended question. The respondents were asked to define the meaning of the Scope of Practice in her or his critical care nursing practice. The researcher intended to elicit how the respondents viewed the scope of practice as this would influence their application of Regulation 2598 in their practice.

Even though the researcher was of the opinion that focus group interviews could have been very useful, conducting interviews during shifts would have been difficult because the time and availability of critical care trained staff are limited, with unexpected admissions and crises being the norm. Nursing staff are reluctant to use their off-duty time for events perceived to be work related, especially if this time is not given back to them at a later stage.

The researcher made an appointment with each unit manager, and visited each hospital to explain and discuss the purpose of the study and the sample inclusion criteria with her or him. Thereafter, the unit manager informed all staff (who conformed to the inclusion criteria of the study) at each shift change of the study. Those who were willing to participate were requested to complete the questionnaire. A letter attached to the questionnaire explained the purpose of the study and explained how the questionnaire should be completed. As opinion related to patient care in a critical care unit is often based on discussion between colleagues, the respondents were not specifically asked to avoid discussion whilst completing the questionnaire.

On completion of the questionnaire, the respondent sealed it in an opaque envelope. The unit manager kept the completed and sealed questionnaires locked away and after one month the researcher collected all the completed questionnaires from the unit manager. The researcher did not influence the composition of the sample beyond setting the inclusion criteria.

No additional fieldworkers other than the assistance of the unit managers were utilised.

3.5 Validity and reliability

The use of research instruments cannot be separated from the concepts of validity and reliability. It is vitally important that the questionnaire actually measure what the researcher intends to measure. According to Brink (1996), instrument validity refers to whether an instrument accurately measures what it is supposed to measure given the context in which it is applied.

The literature review informed the development of the questionnaire, which contributed to content validity. Requesting three experts in the field of critical care nursing to review the instrument tested the face and content validity of this instrument. All three of these critical care nurses had at least five years experience in the private healthcare critical care environment. Each had been or was managing a critical care unit at the time. One of the reviewers was a critical care nurse educator and Afrikaans speaking. Feedback from the reviewers indicated that all activities identified in the questionnaire were

appropriate to the critical care nurse and no additional activities were suggested. One reviewer suggested that the questionnaire be shortened, as items that had been included under section 1 were repeated under section 2. This was subsequently done. The Afrikaans-speaking reviewer suggested spelling and grammatical changes in the Afrikaans questionnaire. She also confirmed that the questionnaires in both languages were the same. All reviewers were satisfied that the questionnaire format was clear, readable and unambiguous.

A pilot study was done to identify any flaws in the methodological approach as well as in the instruments. The pilot study thus contributed to confirm the validity of the instruments and the research as a whole.

Validity and reliability can be claimed if the researcher continuously describes, explains, and justifies procedures, statements and practises. Reliability is also increased when the researcher has personal knowledge of and experience in the specific scientific field of the study. The researcher has 10 years of experience in the field of critical care nursing and education, and is conversant with the research environment.

3.6 Pilot study

The questionnaire was changed in accordance with the recommendations of the critical care nurse experts and then discussed with study leaders. The second version of the questionnaire was subject to a pilot study. At this time, the researcher was employed as a unit manager of a critical care unit in a private hospital. Verbal permission was granted by the hospital manager and nursing services manager for the researcher to ask the appropriately registered nurses in the critical care unit to participate in the pilot study.

Four registered critical care nurses were employed in the unit at that time and all four gave verbal consent to participate in the pilot study. The questionnaires were given to the pilot study participants to complete. The participants indicated that the questionnaire was unambiguous and easy to complete. The process took between 15 to 20 minutes to complete. The participants did not identify any further activities that they felt should be

included. On analysis of these four questionnaires, the researcher was of the opinion that the questionnaire did measure what it was intended to measure.

The critical care unit and the personnel who participated in the pilot study were not included in the final sample.

3.7 Ethical aspects

Ethical considerations protect the respondents in any research study. In a text by De Vos *et al.* (2000), Williams *et al.* are quoted as stating that data should never be obtained at the expense of human beings.

Permission to do this study was requested in writing from the hospitals that had adult critical care units in the selected area. Permission was granted by the Director: Nursing and Nursing Service Managers, allowing access to 19 adult critical care units (general, cardiothoracic, cardiac and medical units). (See Addenda C, D and E.)

This research study required that voluntary participants complete a questionnaire to provide their interpretation of the Scope of Practice (No R 2598 of 30/11/1984 as amended). Participation in the study was voluntary; no respondents were forced to complete the questionnaire. An introductory letter was attached to the front of each questionnaire introducing the researcher and explaining the goals of the research project. The voluntary nature of participation was emphasised again. The letter also explained how the respondent should complete the questionnaire. The researcher accepted that if the respondent chose to complete the questionnaire, then she/he consented to participation in the study. The respondents were not remunerated.

On completion of the questionnaire, the respondent sealed it in a plain, opaque envelope on which there were no distinguishing marks. In this way, both the anonymity and confidentiality of the respondent's opinion were maintained.

The researcher made no efforts to identify the hospital source of each questionnaire. Hospitals and hospital groups have not been individually identified in the study.

3.8 Limitations of the study

This study was limited to critical care nurses practising in specific private hospitals in the Western Cape. This could influence the generalisation of these results to the broader South African private critical care nursing services.

The majority of the hospitals included in the sample belong to one private hospital group. This is due to the geographic location of the particular hospitals. This may influence the results of the study as the policy around patient care implemented by this private hospital group would possibly sway the opinion of the respondents.

Data collection was performed over a period of 15 months. It may be argued that the data might be outdated. However, the concepts, principles and activities measured in the data collection tool are generic in the critical care environment, forming the basic skill and activity set applicable to this environment. Although advances in technology do guide and inform practice, the core activities of the critical care nurse have not altered significantly since 2001.

3.9 Data analysis and interpretation

“Data analysis thus entails categorising, ordering, manipulating, and summarising the data and describing them in meaningful terms” (Brink, 1996:178).

3.9.1 Section 1 – Demographic data

Data collected here were grouped and analysed according to the subsections of this section of the questionnaire.

3.9.2 Section 2 – Activities of the critical care nurse

In order to simplify categorising the data, the researcher considered all the points of the Scope of Practice (No R 2598 of 30/11/1984 as amended) and the literature related to the activities of a critical care nurse. The researcher identified four broad concepts related to the acts or procedures given in the Scope of Practice (No R 2598 of 30/11/1984 as amended). These were (including the acts or procedures of the Scope of Practice included in each group):

- The scientific process of nursing

Aspects of the Scope of Practice that the researcher included here were related to assessment, planning, monitoring, intervening and recording of care to the critically ill patient.

- (a) The assessment and diagnosis of a health need, and the prescription, provision and execution of a nursing regimen to meet the need of a patient or group of patients or, where necessary, by referral to a registered person;
- (b) The execution of a programme of treatment or medication prescribed by a registered person for a patient;
- (c) The treatment and care of and the administration of medicine to a patient, including the monitoring of the patient's vital signs and of her or his reaction to disease conditions, trauma, stress, anxiety, medication and treatment;

- Essential care

In this grouping, the aspects of the scope of practice that were included focus on the provision of basic needs of the patient.

- (e) The promotion or maintenance of hygiene, physical comfort and reassurance of the patient;

- (f) The promotion of exercise, rest and sleep with a view to healing and rehabilitation of a patient;
- (g) The facilitation of body mechanics and the prevention of bodily deformities in a patient in the execution of the nursing regimen;
- (t) The care of the dying and the care of the recently deceased patient within the execution of the nursing regimen;

- Homeostasis

This group included all aspects of the scope of practice related to activities involved in achieving and maintaining homeostasis.

- (b) the execution of a programme of treatment or medication prescribed by a registered person for a patient;
- (c) The treatment and care of, and the administration of medicine to, a patient, including the monitoring of the patient's vital signs and of her or his reaction to disease conditions, trauma, stress, anxiety, medication and treatment;
- (h) The supervision and maintenance of a supply of oxygen to patient;
- (i) The supervision and maintenance of fluid, electrolyte and acid-base balance of a patient;
- (j) The facilitation of the healing of wounds and fractures, the protection of the skin and the maintenance of sensory functions in a patient;
- (k) The facilitation and maintenance of bodily regulatory mechanisms and functions in a patient;

- (l) The facilitation, maintenance and improvement of the nutrition of a patient;
- (m) The facilitation and maintenance of elimination by a patient;
- (q) Preparation for and provision of relevant nursing and facilitating of activities during operative, diagnostic and therapeutic procedures for the patient;

- Therapeutic environment

This group includes aspects of the scope of practice that relate to the creation, maintenance and protection of the therapeutic environment within which the patient is nursed.

- (d) The prevention of disease and promotion of health and family planning by teaching and counselling individuals, families, groups of persons and the community;
- (n) The facilitation of communication by and with a patient, family, significant others, groups and communities;
- (o) The facilitation of the attainment of optimum health for the individual, the family, groups and the community;
- (p) The establishment and maintenance of an environment that promotes the physical and mental health of the patient;
- (r) The co-ordination, complementing and facilitating of the healthcare provided for the patient by other categories of health personnel;
- (s) The provision of effective patient advocacy to enable the patient to obtain the healthcare she or he needs;

As can be seen in the explanation provided, two of the acts/procedures, namely (b) and (c) of the Scope of Practice, are repeated in the groups 'scientific process of nursing' and 'homeostasis'. This is because these acts/procedures were interpreted by the researcher as in a broad sense related to the activities of the critical care nurse in the concept group 'scientific process of nursing' (for example, develop nursing care plan to resolve identified patient problems). In the concept group 'homeostasis', these acts/procedures were interpreted more explicitly (for example, insert intravenous lines).

Each activity from the questionnaire was then assigned to one of the four groups to allow the researcher to analyse the data and make meaningful deductions and conclusions.

The division of the activities was as indicated in the tables below. The first column indicates the activity number in the questionnaire with the activity description in the second column.

TABLE 3.1

The scientific process of nursing

	<i>Activity Description</i>
1	Physical assessment of the critically ill patient
3	Monitoring and recording of vital signs
4	Interpretation of vital signs

5	Identify patient problems
6	Develop nursing care plan to resolve identified patient problems
28	Manipulate a pulmonary artery catheter
42	Keep scientific record of patient progress

TABLE 3.2

Essential care

	<i>Activity Description</i>
2	Basic needs assessment and care
14	Pain assessment
15	Pain relief interventions
31	Care of the dying patient and her or his family

TABLE 3.3**Homeostasis**

	<i>Activity Description</i>
7	Initiate oxygen therapy (methods)
8	Maintain/protect the airway (interventions)
16	Insert intravenous lines
17	Initiate (basic and advanced life support) on nursing assessment (without medical prescription)
18	Initiate therapy on nursing assessment (without medical prescription)
19	Request investigations on a patient (without medical prescription)
20	Collect blood specimens
22	Administer (drugs) on nursing assessment (without medical prescription)
23	Adjust drug infusion rates against patient response without a prescription
25	Administer any drug according to a standing order

26	Report any changes made to prescribed treatment to attending doctor.
27	Assist a doctor with diagnostic / therapeutic interventions
29	Invasive monitoring lines (set up, insertion, removal)
32	Fluid balance
33	Care of a patient undergoing dialysis
34	Operation of a dialysis machine by a CCRN
35	Nutrition
37	Insertion of drains by CCRN on clinical nursing assessment
38	Care of drainage systems
39	Removal of underwater chest drains by CCRN

TABLE 3.4**Therapeutic environment**

	<i>Activity Description</i>
13	Switch off a ventilator when a patient is declared brain dead
30	Short-term rehabilitation of critically ill patients
36	Infection control
40	Create and maintain a therapeutic environment
41	Move patient between departments
43	Staff management
44	Implementation of a living will
45	Provide information to a medical aid company regarding patient status
46	Participate in developing ICU admission criteria for critically ill patients
47	Assist family in deciding when treatment should be discontinued
48	Terminate treatment at the request of the family

49	Administer analgesia for purposes other than pain relief
50	Close ICU beds when there is a shortage of qualified nursing staff

The questionnaires were collected from the critical care units; each sealed in an opaque envelope. On opening, each questionnaire was numbered and section 1 scanned to ensure that the biographical data indicated that this respondent did comply with the inclusion criteria for the sample.

The data from each questionnaire was then entered onto an Excel[®] spreadsheet. The fields in the spreadsheet corresponded with the data fields on the questionnaire.

An additional column was added into the spreadsheet to allow capturing of non-responders to a question.

After all the questionnaire data had been captured onto the spreadsheet, percentages were calculated for each field.

The arithmetic mean was calculated for main activities category (for example, basic needs assessment and care, monitoring and recording vital signs, etc.) by adding up the number of responses per Likert category for each of the sub-fields in that category. This was done to gain an overall idea of the opinion related to the main activity category.

The data were graphed and analysed in the four groupings discussed above. To gain a broad overview of the opinion of the respondents, the categories of data were compared and where further detail was available, the data were graphed and examined in more detail. Each of the activities was graphed to show the percentage of respondents in each response category:

- no response obtained from the respondent

- the activity is covered by the Scope of Practice (No R 2598 of 30/11/1984 as amended) – indicated as ‘included’ on the graph key
- the activity is not covered by the Scope of Practice (No R 2598 of 30/11/1984 as amended) – indicated as ‘excluded but done’ on the graph key
- activity is not a nursing function – indicated as ‘excluded’ on the graph key

These activities were then analysed with respect to the most prevalent opinion from the sample. This was then compared with available literature in order to draw a practical conclusion on how the registered critical care nurse in the private hospital sector interprets the scope of practice in her or his daily practice.

Tables, graphs and percentages were used in this study to facilitate interpretation and discussion of findings.

3.9.3 Section 3

“In qualitative studies text is considered a rich source of data” (Burns & Grove, 2003:377). In this section, the participants were asked to write down how they define what ‘scope of practice’ meant to them in their daily critical care nursing practice.

This question was asked to discover what meaning the participants assigned to the activities in the questionnaire. Burns *et al.* (2003), reflecting on qualitative research, suggest that data from this type of study leads to understanding a phenomenon in a particular situation and is not generalised in the same manner that quantitative data is. They continue by stating that understanding the meanings of phenomena in a particular situation gives insight that can be applied more broadly. The researcher wanted to identify how the participants viewed the Scope of Practice as it related to their daily critical care nursing activities. Understanding this opinion would assist the researcher in discussing the findings from section 2 of the questionnaire and in identifying where

disparity or congruency lay between the critical care nursing activities and the Scope of Practice. This would also foster the reliability and validity of the study.

Each participant's response to the question was read through carefully a number of times prior to any categorising of data occurred. This allowed the researcher to become familiar with the participant's response, a practice supported by Marshall and Rossman (quoted in De Vos *et al.*, 2000) who emphasise that reading the data several times forces the researcher to become familiar with the data in an intimate way.

Describing and classifying the data involve identifying the categories of meaning held by the participants in the setting (De Vos *et al.*, 2000). The researcher read the responses again and grouped similar comments together. The researcher then identified a theme for each group that most closely represented the view expressed by the comments. The researcher then read the responses again to ensure congruency between the participant's expressed view and the identified themes.

The data is presented as a table of themes with the corresponding comments from the respondents. The views of the respondents are also utilised in the discussion of the data from section 2.

3.10 Summary

This chapter has provided an explanation of how the researcher approached and designed the study.

The next chapter covers the empirical investigation.

CHAPTER 4: DATA ANALYSIS AND DISCUSSION

4.1 Introduction

In Chapter 4, the results obtained in this study are presented and discussed. This phase needs to be done with integrity and rigour.

In De Vos *et al.* (2002), the purpose of data analysis is described as the reduction of data to an intelligent and interpretable form so that the relations of research problems can be studied and tested, and conclusions drawn.

For the purpose of this research, information is generally reported in percentages and in certain instances actual numbers of respondents are quoted. Graphs and tables are utilised in the quantitative analysis followed by a description thereof. The themes identified in the qualitative analysis are presented and discussed.

4.2 Response rate

One-hundred-and-ten questionnaires in total were handed out to the unit managers of the critical care units included in the study. Seventy-two questionnaires were completed and returned to the researcher. Of these seventy-two questionnaires, one (1) was excluded from the study as the respondent did not meet the inclusion criteria for the study – the respondent did not have a qualification in critical care nursing that was registered with the South African Nursing Council. The final study sample thus consisted of seventy-one (71) respondents that rendered a response rate of 64.54%.

4.3 Data analysis

The questionnaire was developed to be analysed with the assistance of MS Excel[®]. The required frequency distributions with percentages were calculated and are presented. The

findings in section 2 are not presented in the order of the activities as set out in the questionnaire.

The findings are presented as described in Chapter 3 under four (4) main groupings of the points in the Scope of Practice of Registered Nurses (No. R2598 of 30 November 1984 as amended). In order to clarify the presentation of the results and related discussion, a table indicating the relevant points of the Scope of Practice of Registered Nurses (No. R2598 of 30 November 1984 as amended) and the numbered activities included in the group under discussion will be provided.

The questionnaire consisted of three sections:

- Section 1: Demographic data
- Section 2: Activities of the critical care nurse
- Section 3: Respondent's definition of the Scope of Practice in clinical practice

The results of this study will be presented under these sections.

4.3.1 Demographic data

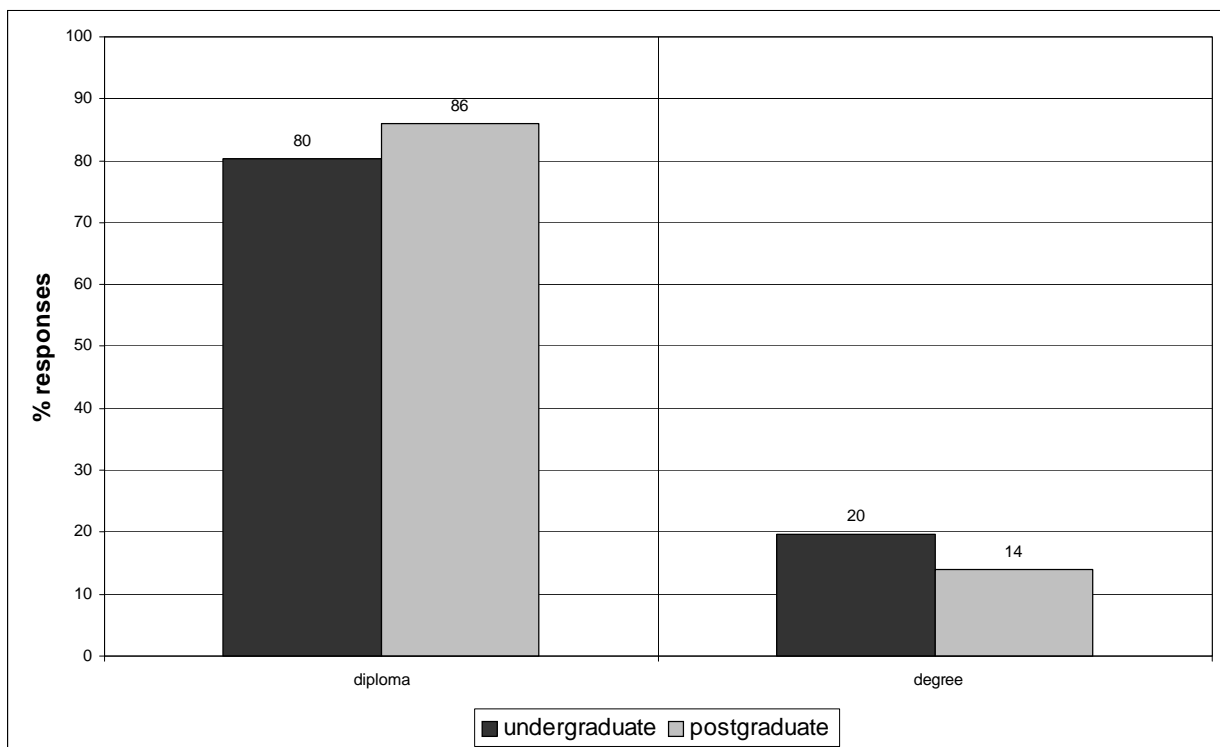
This section contains the questions concentrating primarily on the undergraduate and postgraduate qualifications, number of years of experience in critical care nursing, leadership roles of the respondents and description of the units where the respondents work. This data enables the researcher to gain a 'picture' of the respondents and to describe the quantitative data in terms of these parameters.

This discussion is related to Section 1, questions 1.1 to 1.5.

4.3.1.1 Undergraduate and postgraduate professional qualifications

FIGURE 4.1

Qualification profile (N = 71)



This graph shows the types of qualifications obtained by the respondents in the study. The diploma-educated respondents are indicated on the left side of the graph and degree-educated respondents on the right side of the graph.

Fifty-seven of the respondents (80%) (N=71) had achieved a diploma as their basic nursing qualification, and only fourteen of the respondents (20%) (N=71) had obtained a degree in nursing as their undergraduate qualification. A similar picture is presented by analysis of

the postgraduate/post-basic qualifications. The majority (86%) (61 respondents) gained a post-basic diploma qualification in critical care nursing, with only 14% (10 respondents) (N=71) obtaining a postgraduate qualification in critical care nursing.

The focus of this study is the Western Cape Province. In this province, postgraduate critical care programmes were introduced at a later stage than post-basic diploma critical care courses. The first residential postgraduate critical care programme (Hons BCur at Stellenbosch University) was presented in the Western Cape in 1993. Post-basic programmes in critical care nursing were available for many years before this at the nursing colleges in the province. These programmes led to the registration of an additional qualification by the South African Nursing Council in the nursing speciality of critical care.

The smaller numbers of Baccalaureate-prepared nurses also influences the postgraduate candidate numbers as acceptance into a postgraduate programme relies on undergraduate nursing programme preparation. The apparent movement of some Baccalaureate-prepared registered nurses into diploma-based post-basic programmes is probably due to the lack of availability of postgraduate critical care programmes prior to 1993.

This information is valuable to the study because it enables the researcher to identify whether there is a difference between how diploma-prepared registered critical care nurses and degree-prepared registered critical care nurses interpret the Scope of Practice of Registered Nurses (No. R2598 of 30 November 1984 as amended) in the context of private sector critical care nursing.

4.3.1.2 Years of experience in critical care nursing

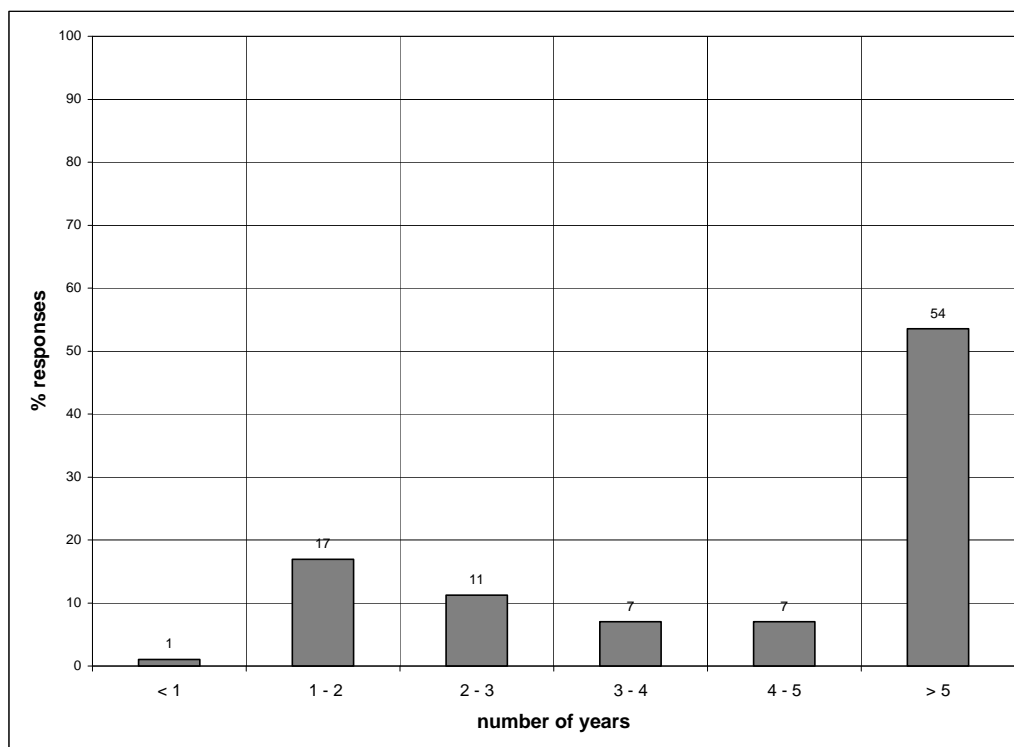
This data describes the experience of the respondents in the sample related to critical care nursing. The years of experience are divided into nursing experience gained prior to obtaining the specialist qualification and the number of years of critical care nursing experience after gaining the qualification.

This data again adds to the researcher's understanding of the sample's professional context. The more experienced respondents in the sample will allow for better

understanding of how the registered critical care nurse interprets her or his scope of practice, which will increase the validity of this study.

FIGURE 4.2

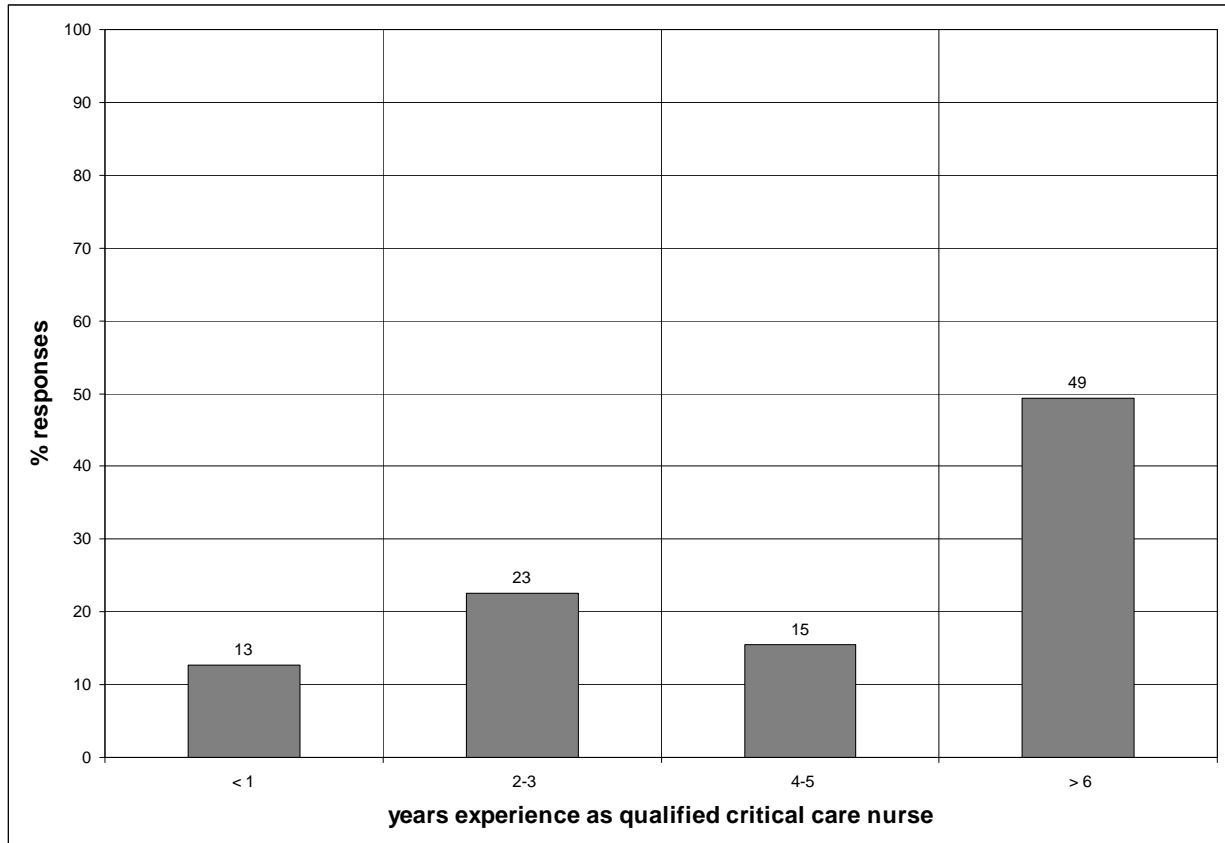
Experience prior to critical care qualification (N=71)



This graph shows the number of years that the respondents have in nursing experience since completing a basic or undergraduate nursing programme resulting in registration as a nurse by the South African Nursing Council up to obtaining the critical care qualification.

Thirty-eight respondents (54%) (N=71) had more than five (5) years of experience from their basic nursing qualification to gaining their critical care qualification. It is interesting to

note that the next highest group (12 respondents, N=71) had between one to two years of experience between registration as a general nurse and registration as a critical care nurse. This could be due to the change in attitude towards post-registration qualifications. Previously, a registered nurse had to wait any number of years before they would be considered for study leave, and then had to 'wait their turn'. This meant that nurses could wait for five or more years before being allowed to continue their studies. Presently, there is a significant shortage of critical care registered nurses available in SA and therefore in the private hospital sector in the Western Cape, which has prompted the demise of the previous system and allowed nurses with less experience to enter critical care nursing programmes.

FIGURE 4.3**Years of experience as a critical care registered nurse (N=71)**

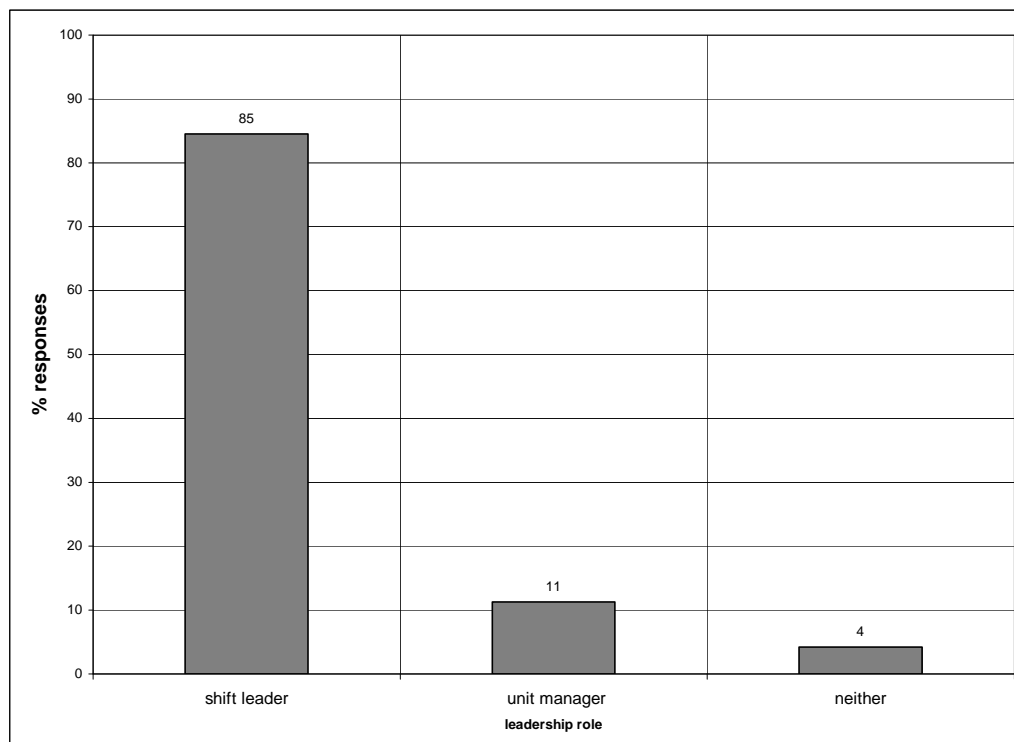
This figure shows the number of years of experience the registered nurses in the sample have as registered critical care nurses after successful completion of a critical care programme. The majority of the sample of 35 respondents (49%) (N=71) had worked in the critical care environment for more than six years after gaining their post-basic/postgraduate qualification. This shows that the majority of the sample has a wealth of experience in the critical care environment.

The researcher is concerned to note that only eleven (11) respondents (15%) (N=71) have four to five years of post-qualification experience. This may indicate that there are fewer registered nurses remaining in critical care practice to become expert practitioners once

they have qualified as critical care nurses. This also shows that there is a smaller pool of role models and mentors available to the novice critical care nurse to provide clinical guidance in the care and management of critically ill patients. A possible reason for this decrease in the mid-experience range is the exodus of critical care trained nurses to foreign countries.

4.3.1.3 Leadership roles

FIGURE 4.4
Leadership roles (N=71)



The role of shift leader is fulfilled by sixty (60) respondents (85%) (N=71). The shift leader fulfils a supervisory role in the critical care unit. Generally in private practice, this role requires that the critical care nurse manages the care of at least one patient directly, while supervising the care of the remainder of the patients in the critical care unit. The shift leader would also be required to do staff-patient allocation, determine staffing requirements for following shifts, manage new patient admissions and ensure adequate stock and equipment availability amongst other tasks. The shift leader role exposes the critical care registered nurse to many management functions. On further analysis of the data, it is shown that of the respondents fulfilling the role of shift leader, the majority – 27 respondents (45%) (N=71) – have more than six years of experience as a registered critical care nurse. This again reinforces the validity of the opinion of this sample because these registered critical care nurses who have more than six years of experience will have applied the Scope of Practice of Registered Nurses (No. R2598 of 30 November 1984 as amended) to a multitude of different patient-care situations.

A further eight respondents (11%) (N=71) are unit managers of critical care units, with six of these respondents having more than six years of experience as a critical care nurse. While this role previously may have removed the nurse from direct patient care, with the shortage of critical care registered nurses the unit manager is now involved in direct patient care.

This places 96% of the sample (N=71) in a position to provide a unique perspective on the scope of practice of the critical care nurse with respect to issues arising from unit management.

4.3.1.4 Type of unit

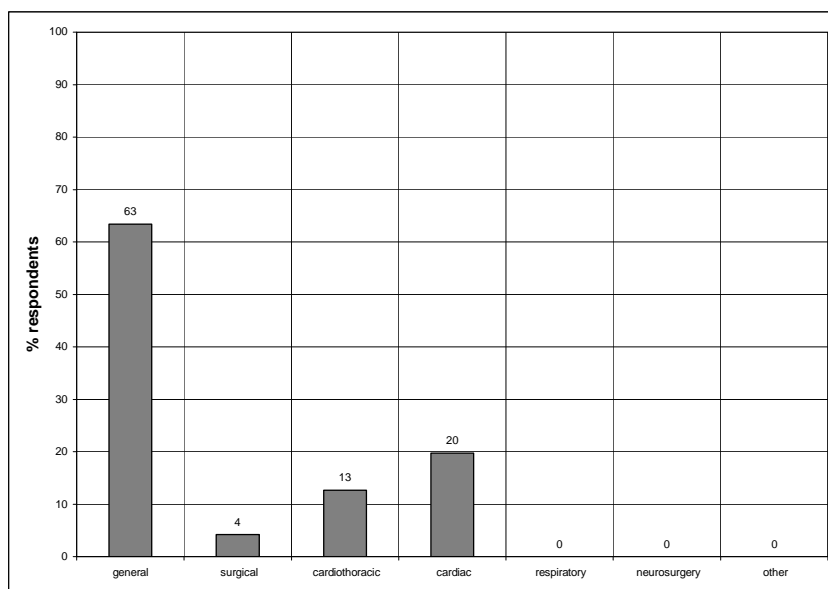
This section focused on obtaining data regarding the discipline of critical care where the respondents have gained their critical care nursing experience.

This data assists in determining the generality of the opinion of the sample to the broader field of critical care nursing. If, for example, the majority of the sample had gained their experience in a cardiac critical care unit, the researcher would have to limit the findings of

this study to the application of the Scope of Practice of Registered Nurses (No. R2598 of 30 November 1984 as amended) in a cardiac critical care unit only.

FIGURE 4.5

Type of unit (N=71)



The majority of respondents, 45 (63%) (N=71), have experience in working in a 'general' critical care unit. This 'general unit' is found commonly in the private healthcare sector where it caters to all patients requiring critical care treatment. This means that patients with a variety of diagnoses and from varying disciplines may be admitted. These disciplines include different types of surgery (vascular, orthopaedic, abdominal, neurosurgery, etc.), cardiac, respiratory, medical (endocrine, gastrointestinal, etc.), neurology and trauma. Certain of these 'general' critical care units also admit patients following cardiothoracic surgery. Registered critical care nurses working in these units would therefore have a broad base of experience in caring for these patients and are able to provide an informed opinion about the many activities performed in the care of these patients. The opinion of

the sample can also be generalised to the broader field of critical care nursing in the private healthcare sector.

Due to the high costs associated with developing, equipping, staffing and maintaining private healthcare critical care services there are very few superspecialised critical care units. Examples of superspecialist units would include cardiothoracic, neurological or respiratory units. The limited availability of superspecialised units can also be seen in the much smaller percentages of registered nurses that have indicated these as the type of unit they are working in. Three respondents (4%) (N=71) indicated working in a surgical critical care unit, ten respondents (14%) (N=71) in a cardiac unit and fourteen respondents (20%) (N=71) in a cardiothoracic unit, while no respondents indicated working in a neurological or respiratory unit. Patients requiring specific neurological, respiratory, or post-surgical management are usually admitted to the general critical care units.

In summary, this section of the questionnaire allowed the researcher to develop a picture of the respondents from the private healthcare sector. The respondents in the sample have mainly followed diploma programmes in obtaining their basic and post-basic qualifications in nursing and then critical care nursing. Most of the sample practised nursing for five or more years prior to obtaining their critical care qualification and have 6 years or more experience as a registered critical care nurse. Most of the respondents work in a general critical care unit and fulfil the role of shift leader.

4.3.2 Activities of the critical care nurse

The activities of the critical care nurse must focus on the provision of quality nursing care. This is supported by Nel (1993) who states that *“gehalte-verpleging is dus die kern van intensiewe verpleging. Die doel van al die funksies en aktiwiteite is om gehalte-verpleging te lewer.”*

The data collected under this section of the questionnaire have been grouped together under specific headings pertaining to the Scope of Practice (R2598), as described in Chapter 3. The specific numbered activity applicable to the aspect of the Scope of Practice

of Registered Nurses (No. R2598) under discussion will be indicated for the purposes of clarity.

4.3.2.1 The scientific process of nursing

This grouping of data includes the following elements of the Scope of Practice (R2598) and activities from the questionnaire:

Table 4.1 summarises the data to be discussed in the grouping of the scientific process of nursing. The column on the left indicates which elements of the Scope of Practice (R2598) are included in this grouping. The column on the right shows which critical care activities from the questionnaire may be related to these particular elements of the Scope of Practice (R2598).

Table 4.1

The scientific process of nursing

Element from the Scope of Practice (R2598)	Critical Care Activity (number indicates the number of the activity on the questionnaire)
<p>(a) The assessment and diagnosis of a health need and the prescription, provision and execution of a nursing regimen to meet the need of a patient or group of patients or, where necessary, by referral to a registered person.</p> <p>(b) The execution of a programme of treatment or medication prescribed by a registered person for a patient.</p> <p>(c) The treatment and care of a patient and the administration of medicine to a patient, including the</p>	<p>1 - Physical assessment of the critically ill patient</p> <p>3 - Monitoring and recording of vital signs</p> <p>4 - Interpretation of vital signs</p> <p>5 - Identify patient problems</p> <p>6 - Develop nursing care plan to resolve identified patient problems</p> <p>42 - Keep scientific record of patient progress</p>

<p>monitoring of the patient's vital signs and of her or his reaction to disease conditions, trauma, stress, anxiety, medication and treatment.</p>	
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FIGURE 4.6

The scientific process of nursing (N = 71)

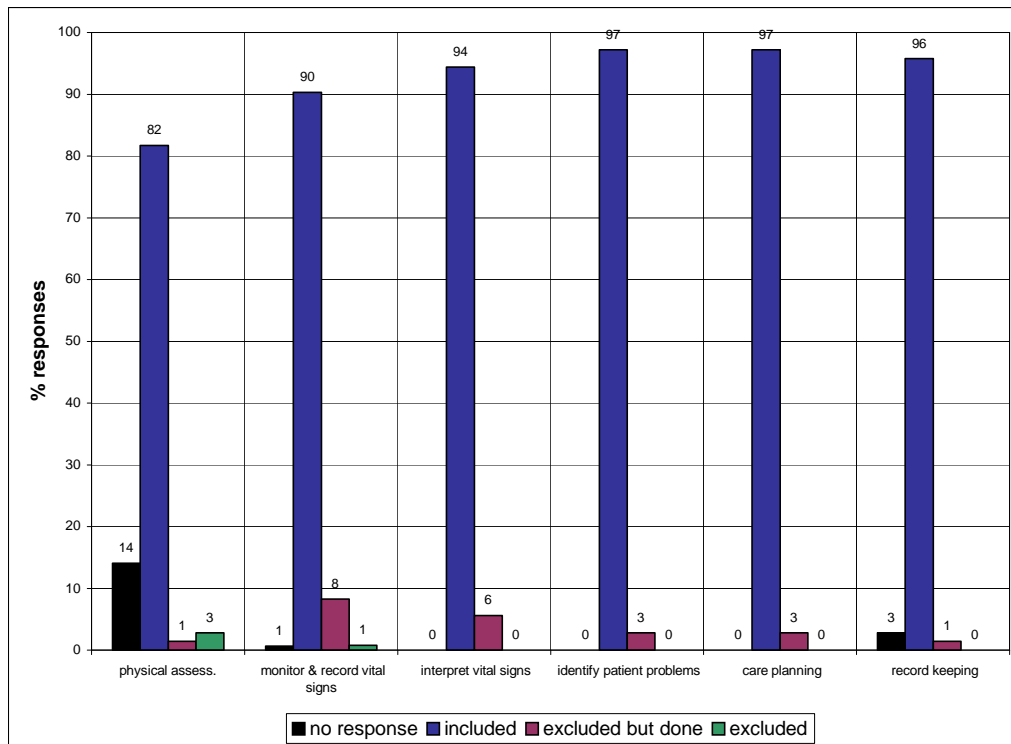


Figure 4.6 represents the respondents' opinion about whether the identified aspects (see Table 4.1) of the nursing process are included as part of their scope of daily practice in a critical care unit.

When considering whether performing a physical assessment is part of their scope of practice, the critical care nurses appear unsure. While 58 respondents (82%) (N=71) do consider this activity to be part of their scope of practice, a further 10 respondents (14%) (N=71) did not respond to the question. This is cause for concern as the physical assessment of a patient is vital in collecting data to continue with the further components of the nursing process.

Generally, it is noted that most of the respondents are of the opinion that the remaining activities are covered by the Scope of Practice (R2598) as part of their daily practice. Sixty-four respondents (90%) (N=71) included monitoring and recording of vital signs, 67 respondents (94%) (N=71) included interpreting vital signs, 69 respondents (97%) (N=71) included identifying patient problems and care planning, and 68 respondents (96%) (N=71) included record keeping as covered by the Scope of Practice (R2598).

It is cause for concern that not all respondents noted these activities as being included in the Scope of Practice (R2598). Activities related to the assessment of the patient, planning, executing and evaluating patient care and maintaining a comprehensive and accurate record of this care are widely regarded in literature to be part of the scope of practice of a generalist registered nurse. Scribante *et al.* (1995) specifically state that the critical care nurse should have the ability (knowledge, skills, values) to make a correct nursing diagnosis, and to prescribe, provide and execute a nursing regimen. Nel (1993) adds that the critical care nurse must have the necessary knowledge and competency to perform accurate patient assessment and to interpret this data.

Specific aspects of the above figure have been analysed further to gain clarity on the opinion of the critical care nurse practitioners.

Certain of the activities that are performed in the care of the critically ill patient are more complex and thus cannot be merely confined to a single question. In the grouping of data presently under discussion, this pertains to the monitoring and recording of vital signs (activity 3: 3.1-3.9 on the questionnaire). There are a number of physiological parameters that are measured in assessing the stability of a patient's clinical status. Some of these

measurements are more complex in nature to obtain, perhaps requiring action on the part of the critical care nurse that she or he may consider to be excluded from the Scope of Practice (R2598). In order to clarify the opinion of the registered critical care nurse this general activity of monitoring and recording vital signs was deconstructed into the specific measurements that may be performed.

4.3.2.1.1 Monitoring and recording vital signs

The activities from the questionnaire for discussion under this heading include activity 8 (8.1-8.8), 9, 10, 11 and 12.

The data contained in Figure 4.7 relate to the opinion of the critical care nurse around specific physiological parameters that may be measured during the broader activity of monitoring and recording vital signs and the Scope of Practice (R2598).

FIGURE 4.7

Monitoring and recording of vital signs (N=71)

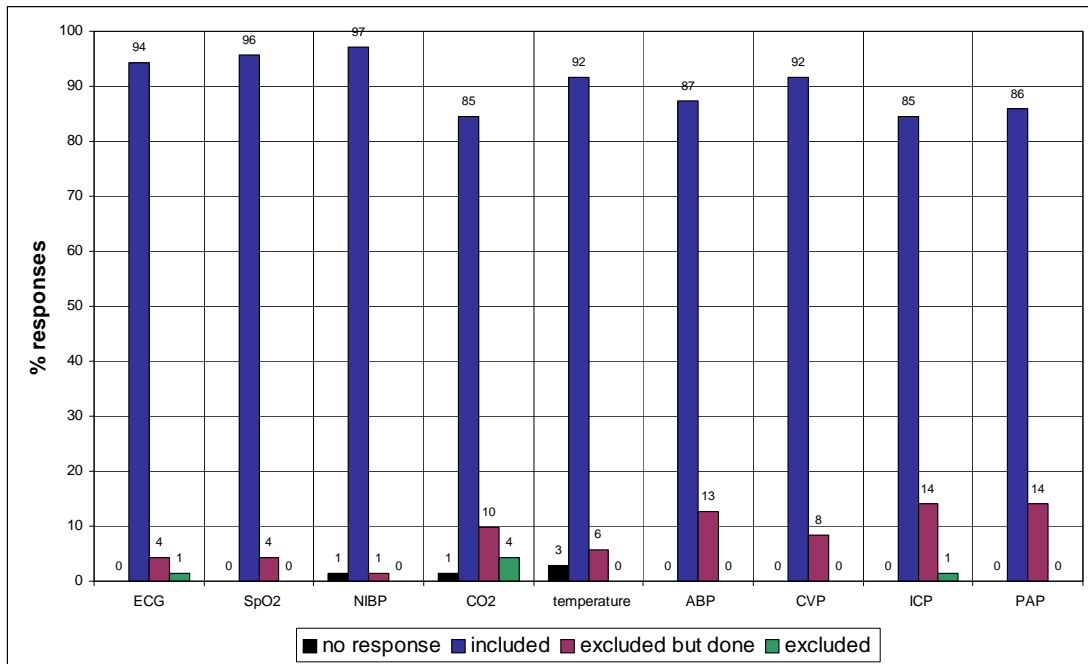


Figure 4.7 depicts the opinion of the sample with respect to whether the monitoring and recording of specific vital signs are considered to be part of their scope of practice.

The data indicates that the majority of respondents (where 90% or more of the respondents are in agreement) do consider the following to be included in the scope of practice:

- monitoring and recording of ECG rhythm strip: 94% (67 respondents) (N=71)
- oxygen saturation: 95% (68 respondents) (N=71)

- non-invasive blood pressure: 97% (69 respondents) (N=71)
- temperature: 92% (65 respondents) (N=71)
- and central venous pressure measurement: 92% (65 respondents) (N=71)

A vital sign which, surprisingly, is not included in this grouping, albeit by a small margin - 62 respondents (87%) (N=71) do include this parameter in their scope of practice – is the monitoring and recording of arterial blood pressure. Nine respondents (13%) (N=71) consider this activity to be excluded from the scope of practice, but which is performed by critical care nurses nonetheless. Arterial blood pressure monitoring is considered the 'gold standard' of blood pressure measurement amongst critically ill patients, providing the most accurate reflection of intra-arterial pressure through the body. The measurement of this physiological parameter is taught as part of critical care skills in nursing programmes.

Once again, it is cause for concern that not all respondents included the monitoring of these physiological parameters as part of their scope of practice. Scribante *et al.* (1995) state that monitoring the critically ill patient's vital signs, both invasively and non-invasively, comprise an important part of the critical care nurse's direct patient-care function. These particular vital signs form the basis of patient management as the data inform the nurse about the patient's response to therapy or maintenance of the physiological status quo. Should a patient require this type of invasive monitoring, the activity would certainly be regarded as part of the critical care nurse's scope of practice.

The remaining three vital signs that were considered by less than 90% of the sample to be part of the scope of practice include monitoring and recording of expired carbon dioxide, intracranial pressure and pulmonary artery pressure. This is possibly due to more occasional use of these modalities in the monitoring of a critically ill patient. Both expired carbon dioxide and intracranial pressure monitoring are used more specifically in the context of monitoring the neurological patient and there were no nurses who indicated working in a specialised neurological critical care unit.

The use of the pulmonary artery catheter has waned significantly. The use of this monitoring modality is reserved for the most critically ill patients and should only be used by those practitioners who can manage the patient from the data obtained from this device. The pulmonary artery catheter is very expensive and its use in the private healthcare sector is thus limited.

The above-mentioned monitoring modalities are taught to students in critical care programmes and feature in critical care nursing skills reference books. In-service training by medical industry representatives also aim to keep critical care nurses updated with respect to this technology.

4.3.2.1.2 The manipulation of a pulmonary artery catheter

The activities from the questionnaire for discussion under this heading include activity 28 (28.1-28.8).

Following on from the discussion related to the monitoring and recording of specific vital signs, the critical care nurse's opinion related to manipulation of a pulmonary artery catheter was explored further. This is activity 28 in the questionnaire.

Due to the controversy surrounding the pulmonary artery catheter and the researcher's own experience of colleagues' attitude towards the use of this device, the manipulation of a pulmonary artery catheter was investigated further in this study. This was done to establish which aspects of management of the catheter and data are considered by the respondents to be included in the critical care nurse's scope of practice.

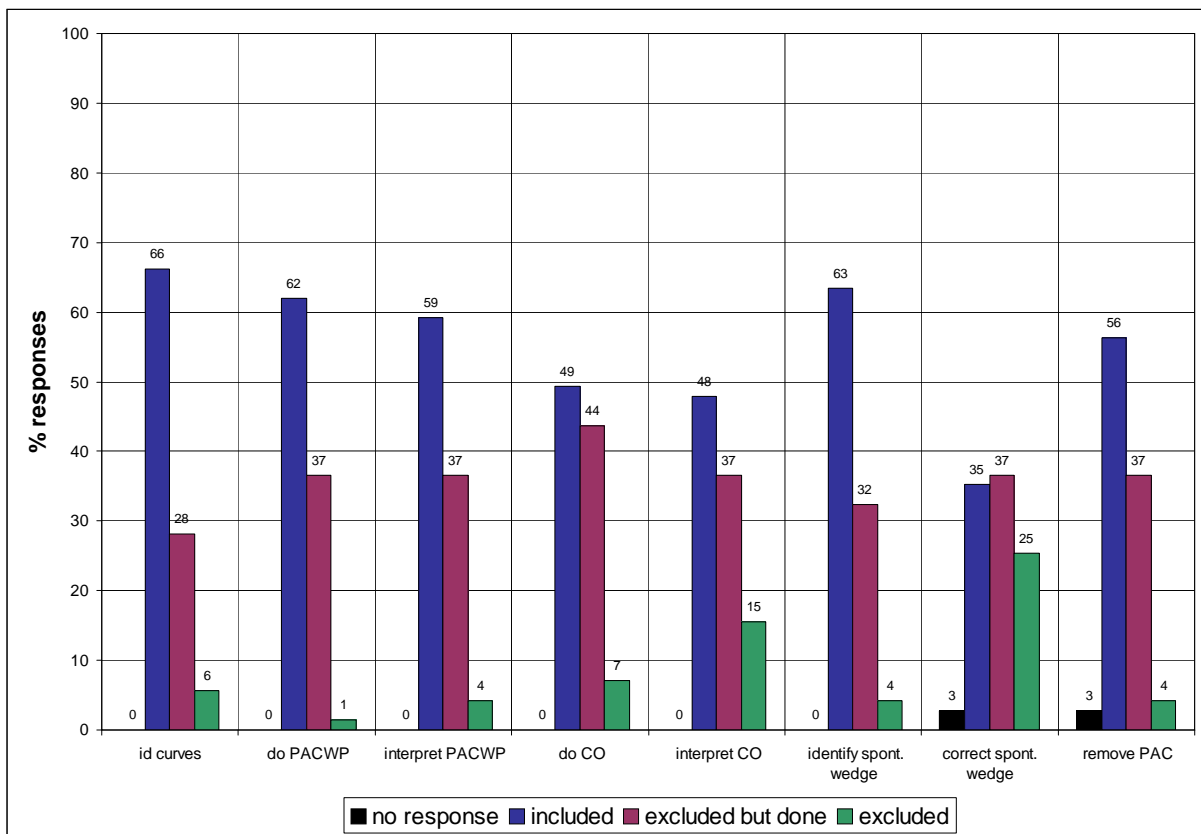
Studies (Aitken, 2000; Storey, 1997) have indicated that amongst medical and nursing practitioners there appear to be inadequate knowledge and understanding of both how the pulmonary artery catheter works, as well as in interpreting and applying the data obtained from the cardiac output studies which can be performed.

In the previous figure (see Figure 4.7), it can be seen that 60 respondents (86%) included the pulmonary artery pressure monitoring and recording as part of their scope of practice

as a critical care nurse. The following Figure 4.8 expands further on the monitoring of this physiological parameter:

FIGURE 4.8

The manipulation of a pulmonary artery catheter (N=71)



The first aspect related to manipulation of the catheter was to consider whether being able to recognise waveforms is part of the critical care nurse's scope of practice. Forty-seven respondents (66%) (N=71) felt this is correct. However, 20 respondents (28%) (N=71) were of the opinion that recognising waveforms was done by the critical care nurse, but should be excluded from her or his scope of practice. A further four respondents (6%) (N=71) felt

this is excluded from their scope of practice and that the attending doctor should fulfil this function.

This pattern is repeated in the opinion on determining the pulmonary artery wedge pressure where 44 respondents (62%) (N=71) included this activity in the scope of practice. Just over one-third or 26 respondents (37%) (N=71) continued to indicate that, despite this being an activity that is performed by a critical care nurse, they are of the opinion that it should be excluded from the scope of practice and be performed by the attending doctor. A similar pattern of opinion is noted related to the critical care nurse interpreting the pulmonary artery wedge measurement, where three respondents (4%) (N=71) excluded this from a critical care nurse's activities.

The use of a pulmonary artery catheter allows the practitioner to determine the cardiac output occurring in a patient. This is done based on thermodilution principles and requires that a volume of fluid that is cooler than body temperature is injected into the right side of the heart. The monitoring system then calculates the cardiac output based on the change in temperature between two points along the catheter. This activity is seldom performed in the critical care unit and therefore may be a reason for the ambivalence shown by the sample where almost half the sample (35 respondents) (49%) (N=71) considered this activity to be included, but 31 respondents (44%) (N=71) indicated that it should be excluded, even though critical care nurses do perform this activity. An additional five respondents (7%) (N=71) excluded the activity, suggesting that the attending doctor should perform this activity.

The ambivalence continues when the interpretation of cardiac output is considered. Thirty-four respondents (N=71) indicated that this activity is part of the scope of practice, whereas 26 respondents (N=71) indicated that this is not covered in the scope of practice and an additional 11 respondents (N=71) excluded this from nursing functions. The last-mentioned group again indicated that the attending doctor should fulfil this function.

A significant complication related to the use of a pulmonary artery catheter is termed 'spontaneous wedging'. Forty-five respondents (63%) (N=71) indicated that identifying this

complication is covered by the scope of practice, but only 25 respondents (35%) (N=71) considered it to be within their scope of practice to attempt to correct spontaneous wedging. The majority of the sample, 37 respondents, (52%) (N=71) indicated that the nurse is not covered by the scope of practice when correcting this complication, and a further 18 respondents (25%) (N=71) do not consider this to be a nursing function, but rather the responsibility of the doctor. This shows a conflict where the respondents indicated that measuring the parameter and identifying a significant complication is included in their scope of practice, whereas managing this complication becomes another practitioner's (in this case the doctor's) responsibility. As the researcher stated earlier, one of the concerns related to private critical care units is that medical practitioners are usually not immediately available. This interpretation of the scope of practice made by the respondents would thus place the patient at risk.

Removal of the catheter is the subject of debate in many private critical care units. Forty respondents in this study (56%) (N=71) indicated that this is covered in the scope of practice, while 26 respondents (37%) (N=71) indicated that, although critical care nurses do perform this activity, it is not part of their scope of practice.

The inconsistency of opinion related to activities around the use of a pulmonary artery catheter is alarming. There is no clear consensus amongst the respondents related to any aspect of manipulating the pulmonary artery catheter, the interpretation of the data measured or management of the complications related to this device. In the initial opinion, expressed in Figure 4.7, it appears that critical care nurses should monitor and record this parameter. However, on closer examination, in Figure 4.8, critical care nurses do not appear to accept the complexity or perhaps the responsibility of monitoring this parameter. It appears that the respondents are satisfied with marking dots on an observation chart as the extent of their scope of practice related to this activity.

The consequences of this view are dire for both the patient and the critical care nursing fraternity. Patient care will be compromised by the critical care nurse's inability to manage the data and possible complications arising from the use of this device. The collaborative relationship between the attending doctor and the critical care nurse will be diminished. A

critical care nurse who is unable, or unwilling, to develop and maintain an understanding of how this device functions, how data collected influence patient care (nursing care as well as medical management), and how to manage any emergencies that may arise reduces the status of her or his colleagues. She or he then allows continuance of notions by other healthcare professionals, or politicians, that nurses should fulfil a subservient, unthinking role and do not need specialist education and training.

4.3.2.2 Essential care

This grouping of data includes the following elements of the Scope of Practice (R2598) and activities from the questionnaire.

Table 4.2 summarises the data to be discussed in the grouping of: essential care. The column on the left indicates which elements of the Scope of Practice (R2598) are included in this grouping. The column on the right shows which critical care activities from the questionnaire may be related these particular elements of the Scope of Practice (R2598).

Table 4.2

Essential care

Element from the Scope of Practice (R2598)	Critical Care Activity (number indicates the number of the activity on the questionnaire)
(b) The execution of a programme of treatment or medication prescribed by a registered person for a patient (e) The promotion or maintenance of hygiene, physical comfort and reassurance of the patient (f) The promotion of exercise, rest and sleep with a	2 - Basic needs assessment and care 14 - Pain assessment 15 - Pain relief intervention 31 - Care of the dying patient and her or his family

<p>view to healing and rehabilitation of a patient</p> <p>(g) The facilitation of body mechanics and the prevention of bodily deformities in a patient in the execution of the nursing regimen</p> <p>(t) The care of the dying and the care of the recently deceased patient within the execution of the nursing regimen</p>	
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The researcher regards essential care as the care of the most important aspects of the patient as a person, which are those aspects of care that relate to caring for the dignity of the patient and here include attention to the basic needs of a patient, pain management and care of the dying.

FIGURE 4.9

Essential care (N=71)

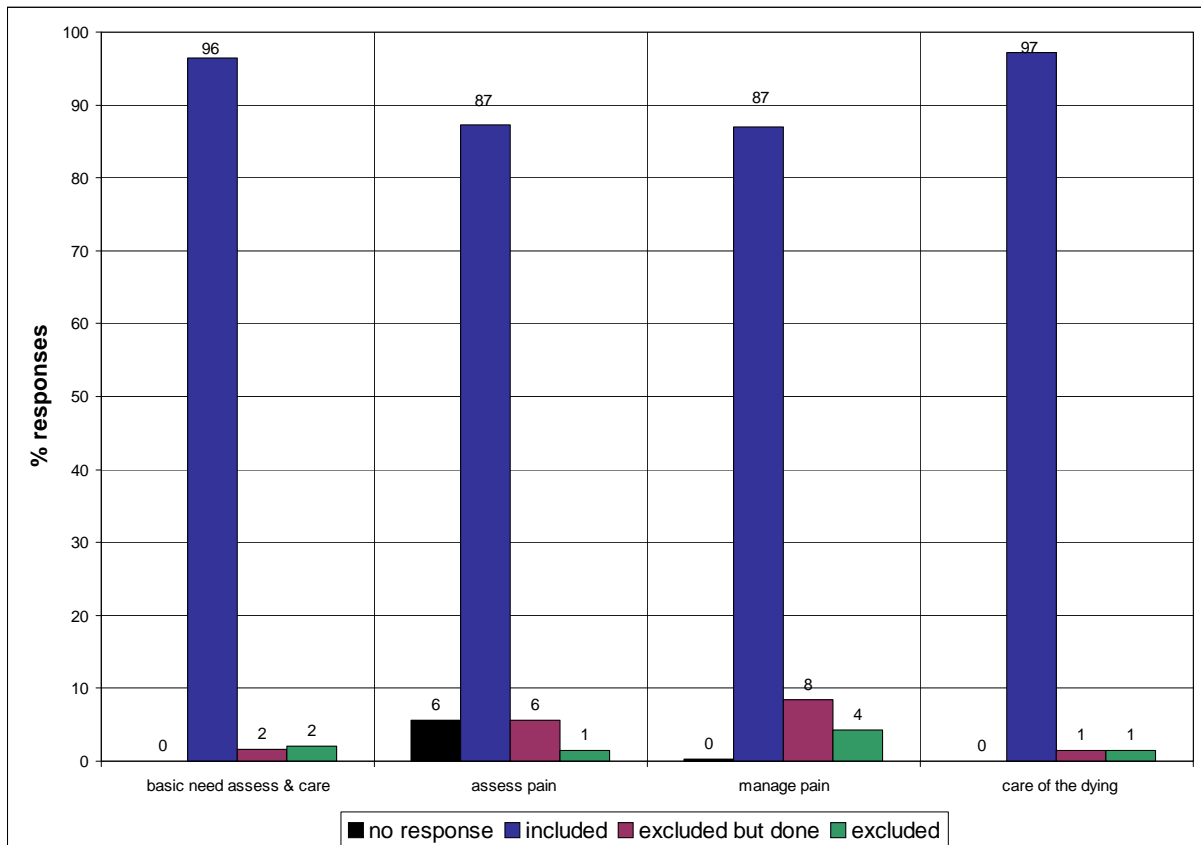


Figure 4.9 shows that 69 respondents (96%) (N=71) agreed that assessment and care of a critically ill patient's basic needs are covered in the scope of practice. Activities included here were (percentages indicate the number of respondents who included these activities in their scope of practice):

- hygiene needs: 97% (N=71)
- pressure care needs: 97% (N=71)

- nutritional needs: 96% (N=71)
- elimination needs: 97% (N=71)
- social needs: 93% (N=71)
- rest + sleep: 99% (N=71)
- mobility needs: 94% (N=71)
- safety needs: 100% (N=71)
- communication needs: 99% (N=71)
- patient advocacy needs: 93% (N=71)

It is reassuring to note that all respondents agree that attending to patient safety needs is included in their scope of practice; it is disturbing that the same response was not achieved for all the other activities related to care of a patient's basic needs. While it may be argued that perhaps activities related to mobility and social needs are difficult to implement for a critically ill patient, these are as important as any invasive form of therapy to assist the patient to achieve a state of health again.

The researcher anticipated that the respondents would agree that nursing care has to include attention to all the basic needs of the patient in order to provide holistic care. Scribante *et al.* (1995) in their article about the interpretation of the scope of practice of the South African critical care nurse specifically refer to the complexity of trying to satisfy the basic healthcare needs of the critically ill. They state that these needs can only be met by a highly skilled critical care nurse who has insight into the nature of each patient's particular condition.

Of particular concern is the lower percentage of respondents who included patient advocacy in their scope of practice. The nurse is widely considered to be the healthcare professional most appropriate to act as a patient advocate (Nel, 1993; Searle & Pera,

1995). This role is very important in the critical care environment where patients are overwhelmed physically, emotionally and intellectually. The critical care nurse by virtue of her or his education and training has to advocate for the interest of the patient in this complex environment. In the private critical care unit where the attending doctor is viewed as a consumer of the hospital's services it may be that nurses are subtly discouraged from discussions that may appear to be confrontational, rather than encouraged to promote the interests of the patient, the consumer of nursing care.

Pain assessment (activity 14) and management (activity 15) were included here as an opportunity to investigate more carefully the opinion of the sample concerning these important aspects of patient care related mainly to patient comfort. Pain influences many aspects of essential care and the provision of basic needs care, for example by interfering with the patient's ability to rest and sleep. A patient experiencing pain will also exhibit altered vital signs such as hypertension, tachycardia and tachypnoea, which can further complicate an already unstable physiological status. Pain assessment and management are therefore important activities to help achieve holistic patient management. The results are discussed under Figure 4.10.

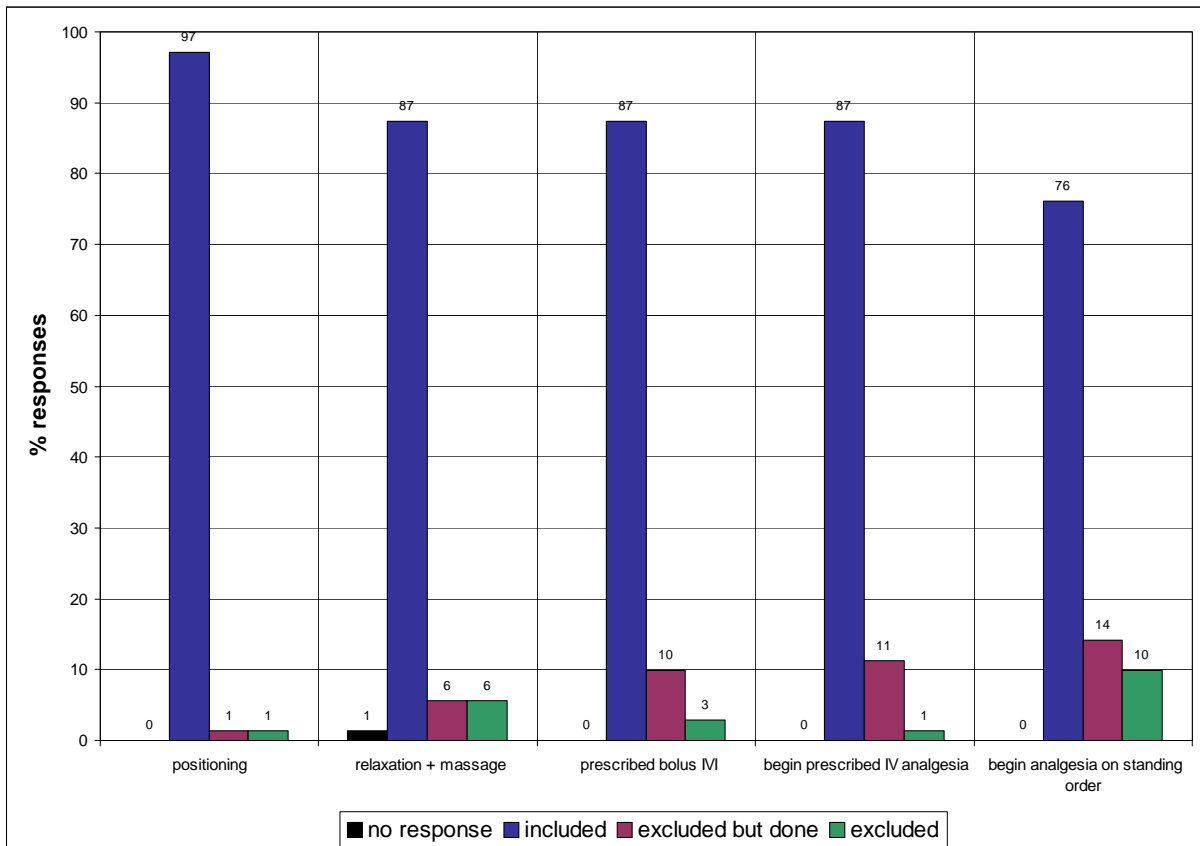
Care of the dying patient amplifies many of the aspects of care for the basic needs of patients, which perhaps more appropriately should be called essential care. Here 69 respondents (97%) (N=71) indicated that this important aspect of patient care is covered by the scope of practice.

4.3.2.2.1 Pain management

The activities from the questionnaire for discussion under this heading include activity 14, 15 (15.1-15.5).

FIGURE 4.10

Pain management (N=71)



The majority of the sample, 69 respondents (97%) (N=71) reflected that pain management by altering the patient's position is included in the Scope of Practice (R2598). Sixty-two respondents (87%) (N=71) indicated that using massage and relaxation techniques is part of their scope of practice. However, 6% (4 respondents) (N=71) indicated that this is not a nursing function and should be performed by a physiotherapist. Sixty-two respondents (87%) (N=71) indicated that administering prescribed bolus dose intravenous analgesia and initiating a prescribed intravenous infusion of analgesic drug are considered to be covered by the Scope of Practice (R2598). Approximately 10% (7 and 8 respondents respectively) (N=71) indicated that, although the critical care nurse does perform these two

activities, her or his actions would not be included in the Scope of Practice (R2598). The specific responsibility, to answer this concern, is described as follows as point (b) in the regulation: *the execution of a programme of treatment or medication prescribed by a registered person for a patient.*

Scribante *et al.* (1995) indicate that the indications, interactions and complications of medicines should all be part of the critical nurse's knowledge base. The same authors suggest that, while the Scope of Practice (R2598) does not specify or limit the route of administration, the critical care nurse should have the knowledge and skill required when utilising any particular route of administration. In this situation, the following would apply:

- as long as an appropriately registered person (a medical doctor) prescribes the analgesia
- and the critical care nurse is satisfied that administration of the medication is suitable to the patient's clinical status,
- and she or he has the skill and knowledge to safely execute the activity in all aspects,
- then the activity should be covered by the Scope of Practice (R2598).

With respect to the practice of initiating analgesia on a standing order, the opinion of 54 respondents (76%) (N=71) was that this is covered by the Scope of Practice (R2598). Ten respondents (14%) (N=71) indicated that it is not covered and 7 respondents (10%) (N=71) excluded this activity from their scope of practice. The practice of administering any medication based on a 'standing order' will be explored later in the discussion.

4.3.2.3 Homeostasis

This grouping of data includes the following elements of the Scope of Practice (R2598) and activities from the questionnaire.

Table 4.3 summarises the data to be discussed in the grouping of homeostasis. The column on the left indicates which elements of the Scope of Practice (R2598) are included in this grouping. The column on the right shows which critical care activities from the questionnaire may be related to these particular elements of the Scope of Practice (R2598).

Table 4.3

Homeostasis

Element from the Scope of Practice (R2598)	Critical Care Activity (number indicates the number of the activity on the questionnaire)
<p>(b) The execution of a programme of treatment or medication prescribed by a registered person for a patient</p> <p>(c) The treatment and care of a patient and the administration of medicine to a patient, including the monitoring of the patient's vital signs and of her or his reaction to disease conditions, trauma, stress, anxiety, medication and treatment</p> <p>(h) the supervision and maintenance of a supply of oxygen to a patient</p> <p>(i) the supervision and maintenance of fluid, electrolyte and acid-base balance of a patient</p> <p>(j) the facilitation of the healing of wounds and fractures, the protection of the skin and the maintenance of sensory functions in a patient</p> <p>(k) the facilitation of the maintenance of bodily</p>	<p>7 - Initiate oxygen therapy (methods)</p> <p>8 -Maintain/protect the airway (interventions)</p> <p>16 - Insert intravenous lines</p> <p>17 - Initiate (basic and advanced life support) on nursing assessment (without medical prescription)</p> <p>18 - Initiate therapy on nursing assessment (without medical prescription)</p> <p>19 - Request investigations on a patient (without medical prescription)</p> <p>20 - Collect blood specimens</p> <p>22 -Administer (drugs) on nursing assessment (without medical prescription)</p> <p>23 - Adjust drug infusion rates against patient</p>

<p>regulatory mechanisms and functions in a patient</p> <p>(l) the facilitation, maintenance and improvement of the nutrition of a patient</p> <p>(m) the facilitation and maintenance of elimination by a patient</p> <p>(q) preparation for and provision of relevant nursing and facilitating of activities during operative, diagnostic and therapeutic procedures for the patient</p>	<p>response without a prescription</p> <p>25 - Administer any drug according to a standing order</p> <p>26 - Report any changes made to prescribed treatment to attending doctor.</p> <p>27 - Assist a doctor with diagnostic / therapeutic interventions</p> <p>29 - Invasive monitoring lines (set up, insertion, removal)</p> <p>32 - Fluid balance</p> <p>33 - Care of a patient undergoing dialysis</p> <p>34 - Operation of a dialysis machine by a CCRN</p> <p>35 - Nutrition</p> <p>37 - Insertion of drains by CCRN on clinical nursing assessment</p> <p>38 - Care of drainage systems</p> <p>39 - Removal of underwater chest drains by CCRN</p>
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4.3.2.3.1 *Initiate oxygen therapy*

The activities from the questionnaire for discussion under this heading include activity 7.

FIGURE 4.11

Initiate oxygen therapy (N=71)

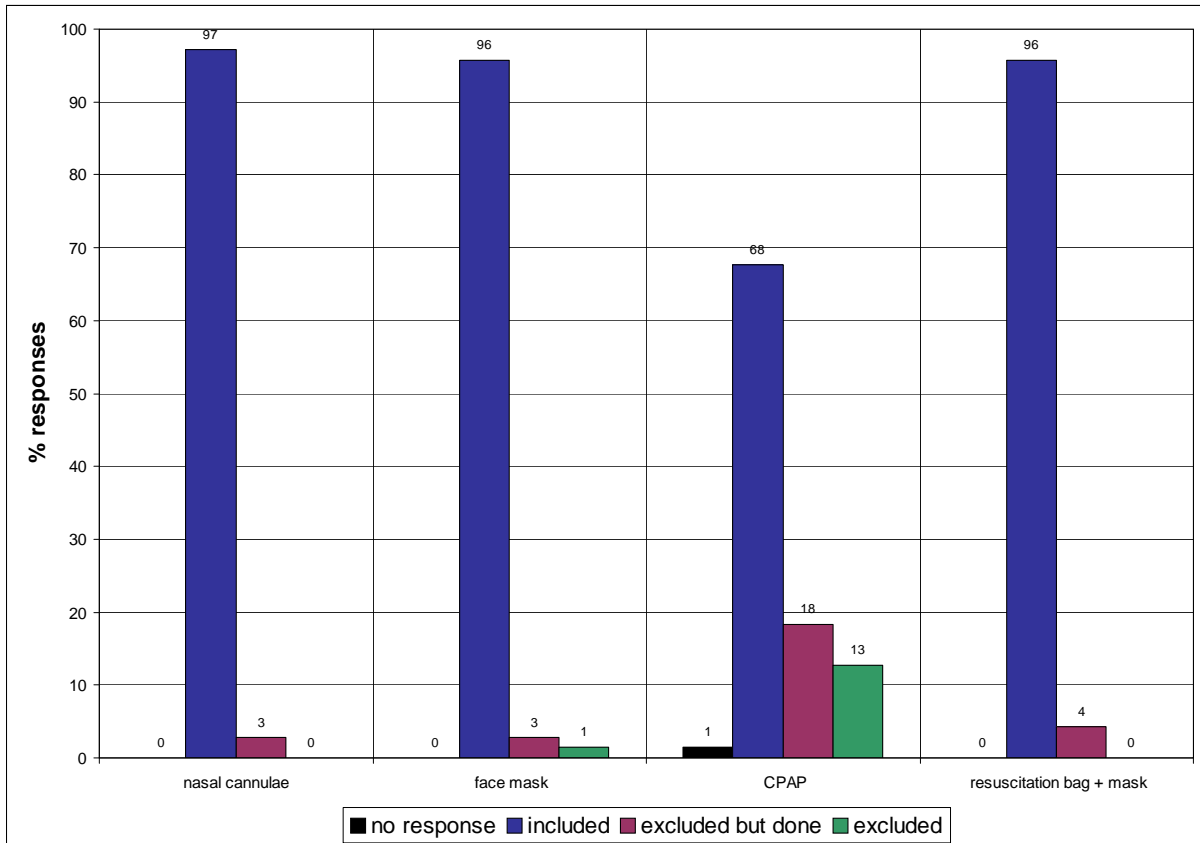


Figure 4.11 shows that the majority of the respondents were of the opinion that the following methods of initiating oxygen therapy are covered by the scope of practice (N=71):

- via nasal cannulae – 69 respondents (97%)
- via face mask – 68 respondents (96%)
- via resuscitation bag and mask – 68 (96%)

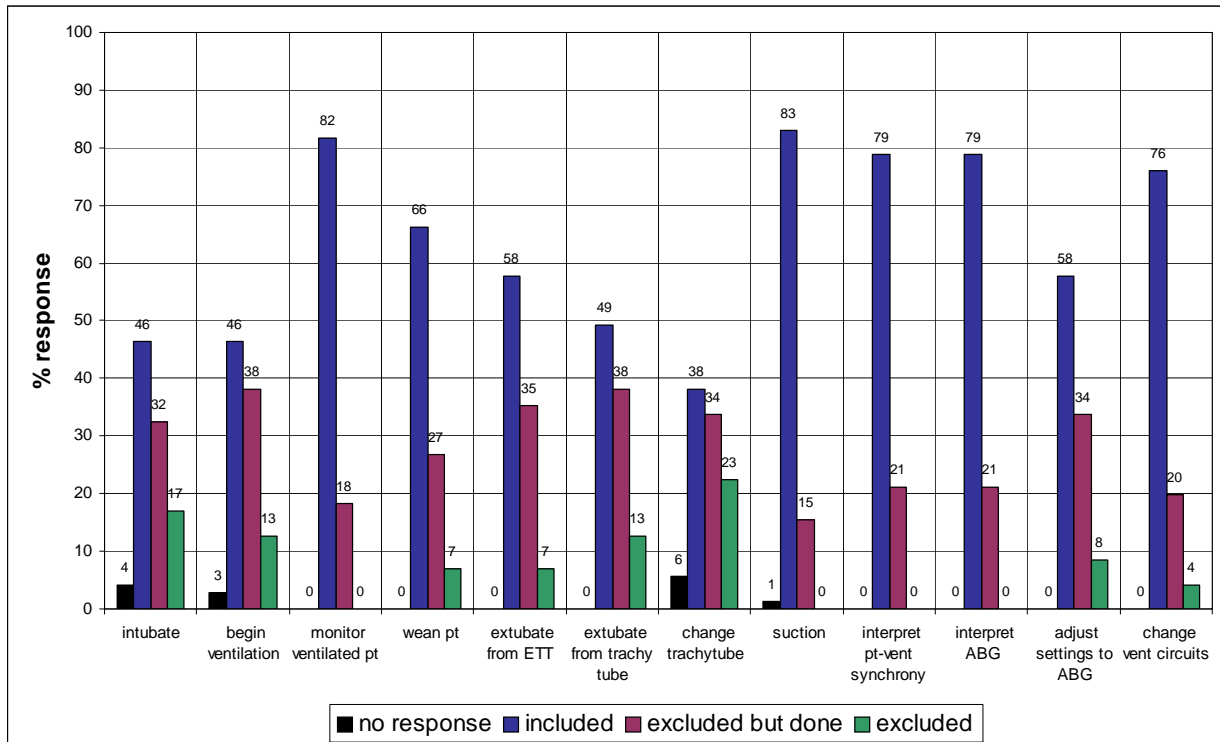
However, related to initiating oxygen therapy using a CPAP modality, a smaller percentage of the sample, 68% (48 respondents) (N=71), indicated that this is part of their scope of practice. Thirteen respondents (16%) (N=71) indicated that they feel that this activity is excluded from the scope of practice, although they do initiate oxygen therapy in this manner, while a further nine (13%) (N=71) indicated this is completely excluded from nursing activities and should be performed by the attending doctor. This opinion is alarming because CPAP therapy is regularly used in general critical care units to support the ventilation efforts of the patient for specific disorders affecting the respiratory system (for example, patients with rib fractures). It is also used as part of the process of weaning a patient from mechanical ventilation. Scribante *et al.* (1995) state that the critical care nurse should have in-depth knowledge of the various types of ventilators and modes of ventilation used in her specific unit, and be skilled in their use. A critical care nurse should have the necessary ability (knowledge and skills) to supervise and maintain the patient's oxygen supply (Scribante *et al.*, 1995). As CPAP therapy is a form of supporting ventilation and thus of providing oxygen to the patient, it is reasonable to include this activity in the scope of practice of a critical care nurse in the private healthcare sector.

4.3.2.3.2 Maintain/protect the airway

The activities from the questionnaire for discussion under this heading include activity 8 (8.1-8.8), 9, 10, 11, 12.

FIGURE 4.12

Maintain and protect the airway (N=71)



The sample is more divided in their opinion related to maintaining or protecting the patient's airway.

Only 33 respondents (46%) (N=71) were of the opinion that intubating a patient is covered by the Scope of Practice (R2598). Twenty-three respondents (32%) (N=71) indicated that, although registered critical care nurses do perform this activity, it is not part of their scope of practice and a further 12 (17%) (N=71) excluded this activity from being part of the critical care nurse's function.

Similar results are noted with respect to the initiation of ventilation for an already intubated patient – 33 respondents (46%) (N=71) again indicated that this is covered in the scope of practice. Twenty-seven respondents (38%) (N=71) indicated that the activity is performed

by the registered critical care nurse but is not part of the scope of practice, and nine respondents (13%) (N=71) indicated that this activity is not a nursing function. In both cases, the respondents felt that the attending doctor should fulfil this function, not the critical care nurse.

This data is important because it has implications for the critical care nurse's activities, responsibilities and competency during a resuscitation attempt, as well as for the presence of a medical doctor in the private hospital critical care unit. Maintenance of an open airway is the first step in ensuring that oxygen is supplied to the tissues. For the critical care nurse to work within the parameters of her or his scope of practice (i.e. to supervise and maintain a supply of oxygen to a patient), she or he should have the knowledge and skill to open the airway and then maintain the patency of the patient's airway.

Searle and Pera (1995) state that a registered nurse must implement emergency measures to keep a patient breathing. These emergency measures include intubation and the administration of oxygen by manual or mechanical means. Viewed from this perspective, it appears that the critical care registered nurse in the private healthcare sector is required by the Scope of Practice (R2598) to be able to intubate a patient. However, the enabling of the nurse to remain competent in this skill must be considered. Searle and Pera (1995:) define competency as being demonstrated cognitive, affective and/or psychomotor ability that is required for the performance of specific activities. This indicates that the critical care nurse must be able to show the knowledge and skill required to safely and correctly intubate a patient on an ongoing basis. While knowledge is relatively easy to update, practise of the skill of intubation is rather more complex. Practising the skill on a demonstration dummy provides for some refining of skill, but it cannot completely mimic the feel and tension associated with an emergency intubation of a patient. In the experience of the researcher, both the doctor and patient in the private healthcare sector are reluctant to allow a nurse to 'practise' to maintain her or his skill of intubation. This reluctance appears to be based on medico-legal concerns on the part of the doctor and what is perceived as the traditional role of a nurse on the part of the patient. What this in effect means is that the

critical care nurse is unable to maintain the skill required for competency and that intubation should therefore not be considered part of the scope of practice.

However, the requirement to be able to maintain an open airway cannot be excluded from the Scope of Practice. Other methods of opening and maintaining an open airway are more easily practised (for example, using bag-valve-mask resuscitator) and enable the critical care nurse to fulfil the expectation of the Scope of Practice (R2598). Sixty-eight respondents (96%) (N=71) agreed that this activity is included in the Scope of Practice (R2598) – see Figure 4.11. This data also has implications for the doctor admitting patients into the critical care unit. While it would be reasonable to expect the critical care nurse to be able to open the patient's airway and begin manual ventilation of a collapsed patient, a definitive airway (i.e. intubation) should be achieved as soon as possible. If the critical care nurse is not exposed to adequate practice of the skill of intubation, there must always be a medical doctor available to the critical care staff who is skilled (practised) in the activity of intubation.

Initiation of ventilation for an already intubated patient is included in the curriculum of critical care nurse education. The student is taught about the use, function and application of ventilation in the critically ill patient. In the experience of the researcher, achieving competency in the care of a ventilated patient is a required clinical skill. This provides the critical care practitioner with the foundation for initiating ventilation as the knowledge and skills are gained. The qualified critical care nurse is provided with ample opportunity during the care of patients in respiratory failure to maintain and develop her or his skills associated with ventilating a patient.

Based on this argument and the comments by Searle and Pera (1995) relating to the necessity of the registered nurse's ability to provide oxygen to the patient by manual or mechanical means, the researcher concludes that initiating ventilation of an intubated patient would be included in the scope of practice of a critical care nurse in the private healthcare sector.

Eighty-two per cent of the sample (58 respondents) (N=71) were satisfied that monitoring a ventilated patient is covered by their scope of practice, with 13 respondents (18%) (N=71) indicating that, although they perform this activity, it is excluded from their scope of practice. Based on the education of a critical care nurse and the comments already considered by Searle and Pera (1995) and Scribante *et al.* (1995), the activity of monitoring a ventilated patient would be included in the Scope of Practice (R2598).

A commonly encountered activity in a critical care unit is the weaning of a ventilated patient. Forty-six respondents (66%) (N=71) were satisfied that this activity is covered by their scope of practice, but more than one quarter of the sample (27%) (N=71) was of the opinion that the registered critical care nurse is acting outside the scope of practice when weaning a ventilated patient. Research has shown that nurse-led weaning protocols are an effective method of reducing the patient's dependence on a ventilator leading to extubation of the patient. These studies show that the critical care nurse has a valuable role to play in this activity. The knowledge and skill of the critical care nurse laid down during her or his education and then developed through practice are essential in assessing the physiological and emotional factors that should be assessed before and during the weaning process.

Extubation is the activity that follows successful weaning. Only 41 respondents (58%) (N=71) indicated that extubation is covered by the scope of practice. Twenty-five respondents (35%) (N=71) believed their actions are not covered by the scope of practice when extubating a patient. A further seven respondents (10%) (N=71) excluded this activity completely, indicating the activity should be performed by a doctor. Extubation of a patient is part of the continuum of supervising and maintaining a supply of oxygen to a patient. The activity encompasses the critical care nurse's knowledge and skill to assess the patient before, during and after extubating a patient to assess the patient's ability to manage her or his own airway and identify any deterioration in the patient's condition.

The sample is even more divided when considering the extubation of a patient who has had a tracheostomy tube inserted for ventilation. Extubating a patient from a tracheostomy tube as part of the scope of practice is only supported by 49% of the respondents (35 respondents) (N=71). Thirty-eight per cent of the respondents (27) (N=71) indicated they

do not feel this is covered by their scope of practice although they do perform this activity. The activity of changing a tracheostomy tube is supported as being included in the scope of practice by 27 respondents (38%) (N=71), 24 respondents (34%) (N=71) indicated the activity is performed although it is not covered by the scope of practice. Sixteen respondents (23%) (N=71) excluded this as a nursing function. All respondents who excluded this activity from nursing function felt a doctor should fulfil it. This response from the sample is cause for concern and complex in nature. One should perhaps ask whether the respondents feel these activities should be excluded from the scope of practice because they are beyond the bounds of the critical care nurse's clinical competency set, or whether the respondents are of the opinion that these should be excluded because the respondents feel uncomfortable with performing these activities, perhaps due to limited experience with tracheostomy tubes. Essentially, a tracheostomy tube is a short endotracheal tube that is inserted percutaneously into the trachea, thus fulfilling exactly the same role as a nasal or oral endotracheal tube does. In the light of this, the critical care nurse must include these activities in their scope of practice.

Fifty-nine respondents (83%) (N=71) agreed that suctioning a ventilated patient is also part of their scope of practice, with 11 respondents (15%) (N=71) indicating that this activity is not included in their scope although they do perform it. Respondents did not indicate who should fulfil this activity if it is excluded from the critical care nurse's practice. This activity is closely related to the maintenance of an open airway and supply of oxygen to the patient and can thus also be seen in the light of the argument made about monitoring the ventilated patient. It is furthermore important to regain the perspective that the critical care nurse is the healthcare practitioner who is closest to the patient. She or he is usually the first recipient of information from the patient and is therefore also the first who needs to act on this information. If the critical care nurse does not respond to a patient's need for the airway to be suctioned clear of secretions immediately because this activity may be someone else's function, it holds negative implications for the physiological status of the patient. Endotracheal tubes can block, coughing spells due to secretions can cause haemodynamic and oxygenation instability, and the anxiety (due to panic) levels of the patient will rise to have further negative sequelae on the patient's condition.

4.3.2.3.3 Insertion and removal of intravenous/invasive lines

The activities from the questionnaire for discussion under this heading include activity 16 (16.1 – 16.5), 29 (29.1 – 29.3.4).

FIGURE 4.13

Insertion and removal of intravenous/invasive lines (N=71)

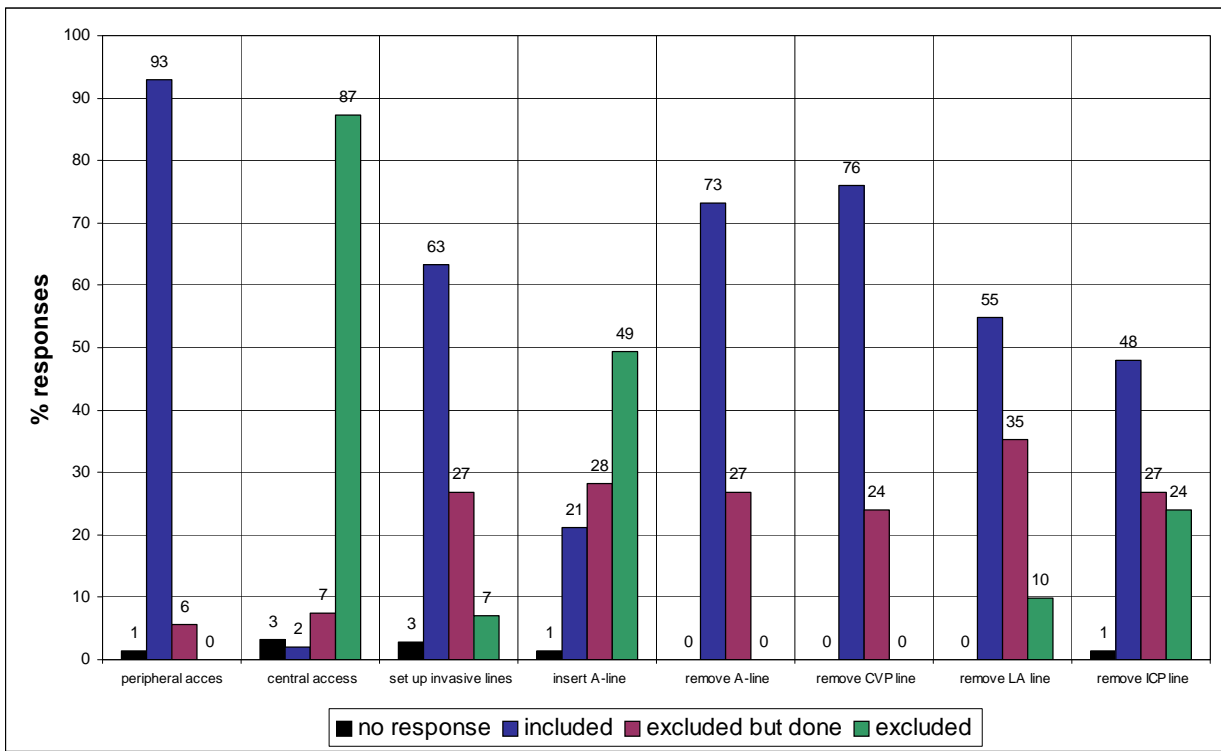


Figure 4.13 shows that 66 respondents (93%) (N=71) agreed that insertion of intravenous lines via the peripheral vein route is an activity that is covered by the scope of practice of a registered nurse. Sixty-two respondents (87%) (N=71) were of the opinion that insertion of central venous lines via any route is not a nursing function, with all agreeing that this is the function of the attending doctor. Thirty-five respondents (49%) (N=71) indicated that

inserting arterial lines is not a nursing function, with the doctor fulfilling this function. The remainder of the respondents indicated that this is an activity performed by the critical care nurse. The respondents are divided over whether the scope of practice would include this activity with 15 respondents (21%) (N=71) indicating that this activity is covered by the scope of practice. Twenty respondents (28%) (N=71) indicated that the scope of practice does not cover this activity.

Forty-five respondents (63%) (N=71) agreed that setting up invasive monitoring lines in preparation for initiation of haemodynamic monitoring is covered by the scope of practice. Nineteen respondents (27%) (N=71) did not agree that this activity would be covered by the scope of practice, despite the registered nurse performing this function.

With respect to the removal of intravenous and invasive lines, 52 respondents (73%) (N=71) of the sample felt that removal of arterial lines is part of the scope of practice. Fifty-four respondents (76%) (N=71) were of the opinion that removal of central venous lines is also part of their scope of practice.

Removal of left atrial lines is included by 39 respondents (55%) (N=71) and 34 (48%) (N=71) included removal of intracranial pressure monitoring lines. However, the percentage of the sample who felt that these two activities are not covered by the scope of practice (left atrial line removal 35%; intracranial pressure line removal 27%) (N=71) or are not a nursing function (left atrial line removal 10%; intracranial pressure line removal 24%) (N=71). This indicates that almost half of the sample believed that the removal of these types of monitoring lines should form part of the activities covered by the scope of practice.

These invasive monitoring systems are used for specialised monitoring in cardiothoracic (left atrial line) and neurological (intracranial pressure line) patients, providing the general critical care nurse with limited experience in the removal of these lines. In critical care units where these types of monitoring systems are used more frequently, it is the responsibility of the registered critical care nurse to inform herself or himself with the knowledge and skill required to manage these monitoring systems and to care for the patient.

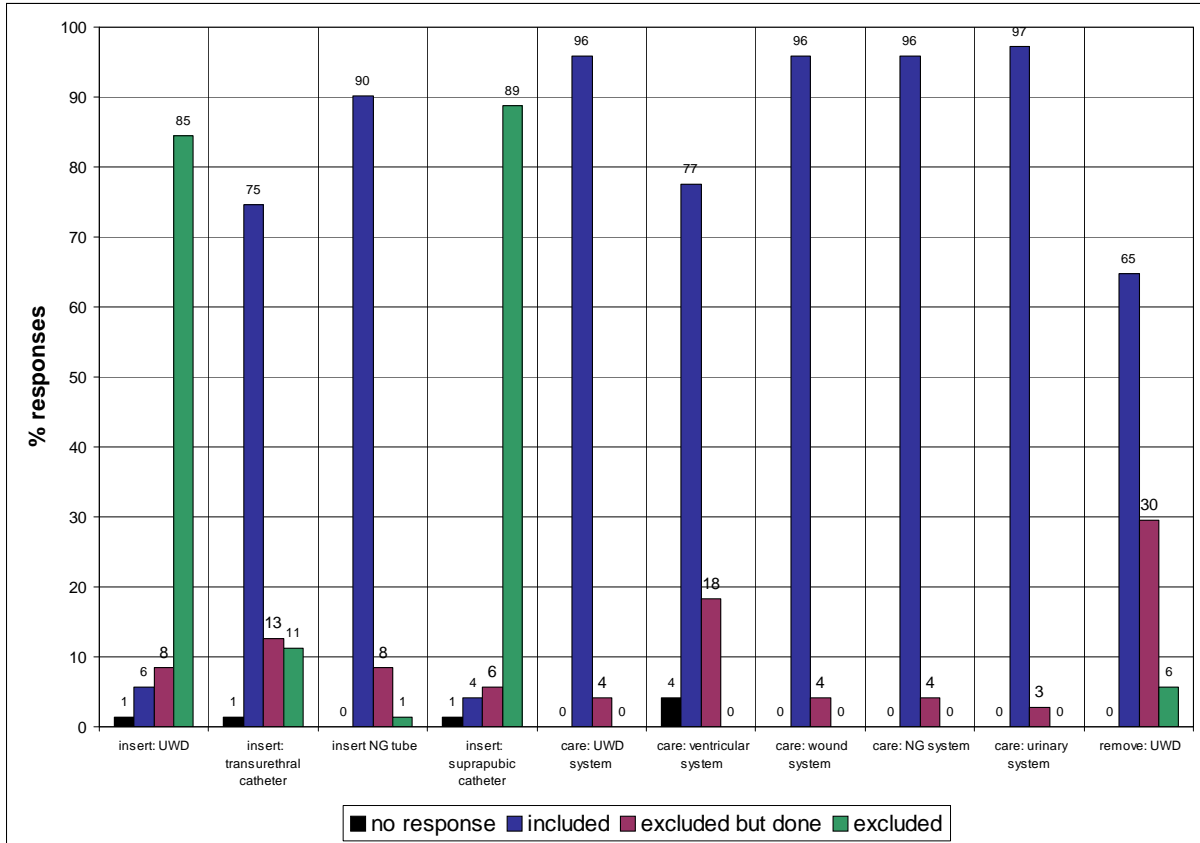
In the private healthcare sector, it would be appropriate for the employing hospital to develop practice guidelines related to these aspects of technology based on research and discussion with the practitioners working with patients requiring this technology. Searle and Pera (1995) comment that where a nurse has to undertake nursing activities not covered in basic preparation as a nurse, she must acquire the relevant knowledge and competence before attempting such activities. The author goes on to state that a formal programme of training is not always necessary to attain such knowledge and informal educational situations can also be appropriate.

4.3.2.3.4 Insertion, care of and removal of drainage systems

The activities from the questionnaire for discussion under this heading include activity 37 (37.1-37.4), 38 (38.1-38.5) and 39.

FIGURE 4.14

Insertion, care of and removal of drainage systems (N=71)



The data depicted in Figure 4.14 relates to the insertion, care of and removal of various types of drainage systems used in the critical care unit.

With respect to the insertion of drains, most of the respondents agree that insertion of urinary catheters (53 respondents) (75%) (N=71) and nasogastric tubes (64 respondents) (90%) (N=71) are covered by the scope of practice. Insertion of both of these drainage tubes is covered in the preparation of a student to become a registered nurse, and thus these activities would be included in the registered critical care nurse's scope of practice.

Sixty respondents indicated that insertion of underwater drains (85%) (N=71) and 63 respondents (89%) (N=71) indicated that insertion of suprapubic catheters are not a nursing function.

Most of the respondents indicated that maintaining or care of the listed drainage systems was part of their scope of practice. With respect to the care of ventricular drains, 55 respondents (77%)x(N=71) felt this was part of their scope of practice and 13 respondents (18%) (N=71) indicated that the scope of practice does not cover this activity despite it being performed by the critical care nurse. Approximately 33% of the respondents (N=71) work in a cardiac or cardiothoracic focused critical care unit, it is unlikely that these respondents would have much experience with a ventricular drainage system (usually found in patients with neurological disorders) and this could have influenced this result. However, the knowledge and skill related to this activity is taught in critical care education programmes and care of (or managing) a ventricular drainage system can be included in element (k) of the Scope of Practice (R2598).

With the question related specifically to the removal of underwater drains, 46 respondents (65%) (N=71) indicated this would be covered by the scope of practice and 21 respondents (30%) (N=71) indicated that this is an activity performed by the critical care nurse, but is not covered by the scope of practice.

4.3.2.3.5 Activities based on nursing assessment: laboratory specimens and data

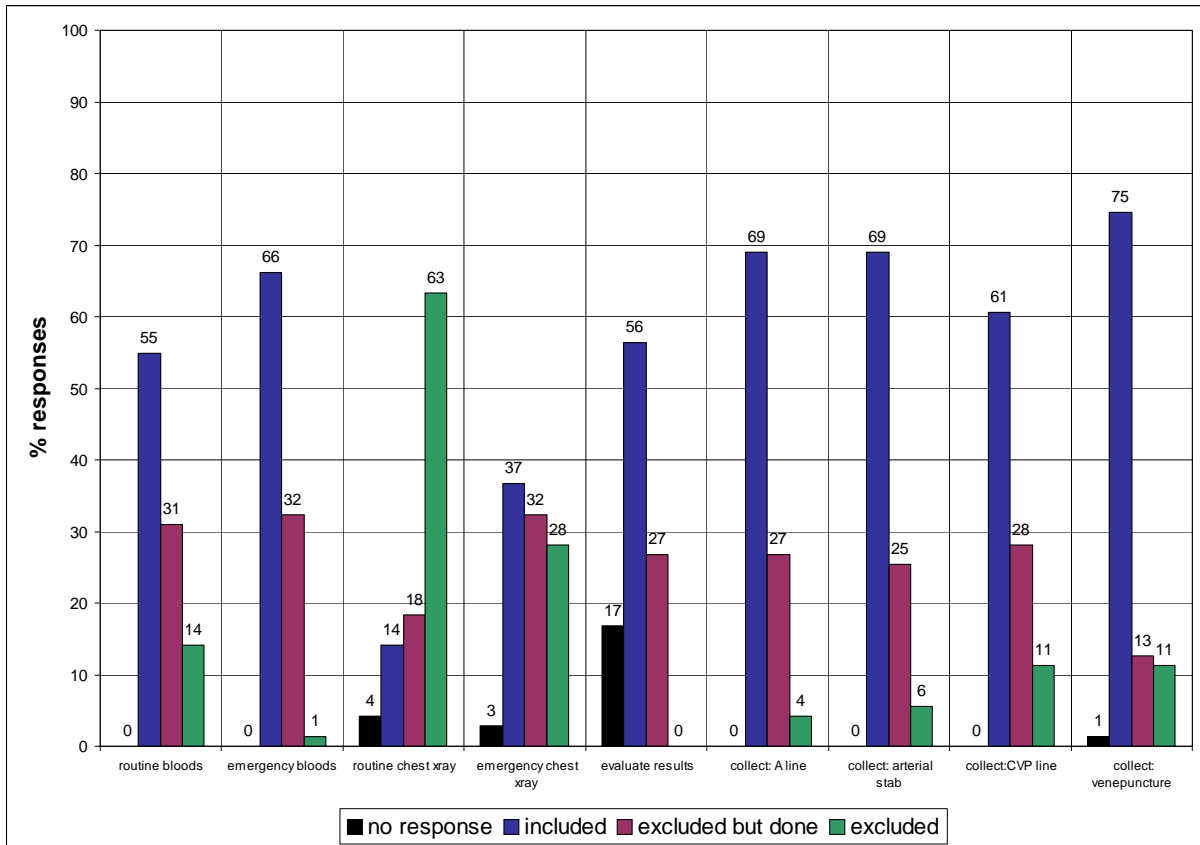
The activities from the questionnaire for discussion under this heading include activity 19 (19.1-19.4), 20 (20.1-20.4) and 21.

Laboratory data adds significant information to the body of knowledge collected about a patient during a stay in a critical care unit. The information gained can redirect the care of the patient requiring adjustments to ventilation, drug prescriptions and so forth. Critical care nurses are usually the practitioners who collect the specimens required for analysis and are usually the first practitioners to receive the results of these tests. It is important in this context to determine the opinion of the registered critical care nurse related to her or his scope of practice with respect to the triggers of sample collection, the type of sample

collection and analysis of the results. There are many laboratory and diagnostic tests that may be performed; the researcher has focused on laboratory tests related to haemoglobin, arterial blood gas and electrolytes as these are the most common parameters measured. Research by Nel (1993) points out that requesting arterial blood gas and electrolyte analysis without a medical prescription is an activity of the critical care nurse. The same author confirms that analysis of these results is an activity of the critical care nurse.

FIGURE 4.15

Laboratory specimens: request, sampling and interpretation (N=71)



The data depicted in this Figure 4.15 relates to the request for, collection and interpretation of laboratory data from the critically ill patient.

Thirty-nine respondents (55%) (N=71) indicated that requesting a routine check of blood parameters (haemoglobin, arterial blood gas and electrolytes) was covered by the scope of practice, while 47 respondents (66%) (N=71) indicated requesting blood tests due to patient deterioration was covered. Approximately one-third of the sample (31% and 32% respectively, N=71) indicated these two activities would not be covered by the scope of practice despite the critical care registered nurse performing this activity. The one-third of the sample who would not request such data due to patient deterioration is cause for concern as this data is important in assessing present patient status, as well as in formulating the treatment strategy forward. Valuable time will be wasted and patient status threatened should the critical care nurse first wait for a telephonic order for blood tests to be performed. Due to the nature and content of her or his education and training, the critical care nurse should be able to assess when the additional information would be valuable for patient management.

Forty-five respondents (63%) (N=71) indicated that a routine request of a chest x-ray is not a nursing function, with the attending doctor responsible for this activity. When a chest x-ray is required due to patient deterioration, 26 respondents (37%) (N=71) indicated that this action would be covered by the scope of practice. Twenty-three respondents (32%) (N=71) indicated the activity would not be covered although a nurse does fulfil this function, and 20 respondents (28%) (N=71) continued to indicate that this is not a nursing function.

This view may be related to the acute awareness by the private sector critical care nurse of the cost of such investigations. She or he would be reluctant to request routine investigations, as the cost of these may not be rationalised if the data cannot be utilised for improving the treatment plan for the patient. Requesting routine investigations merely due to habit and not based on patient's needs is not considered good practice in the managed healthcare context. However, if the patient deteriorates, the additional information may be appropriate to further management of the patient's condition.

It is interesting to note that only a small percentage of the respondents would consider requesting a chest x-ray versus those who would request blood tests in the light of patient deterioration. This may be due to the availability of blood analysis equipment in many

critical care units that the nurse has direct access to as opposed to the radiology department where personnel may have to be called out. In this situation, most critical care nurses would probably prefer the 'safety' of a doctor's request for the investigation. Many radiologists will also not perform a chest x-ray without the specific request of the patient's doctor.

Forty respondents (56%) (N=71) felt that interpreting laboratory data is covered by their scope of practice, while 19 respondents (27%) (N=71) felt that although the activity is performed this would not be covered by the scope of practice.

Most of the registered nurses in the sample (53 respondents) (75%) (N=71) were of the opinion that collection of blood specimens by venepuncture is covered by their scope of practice. However, with other forms of specimen collection the respondents were less confident. Forty-nine respondents (69%) (N=71) indicated that it is within the scope of practice to sample specimens from an *in situ* arterial line or arterial stab, with 43 respondents (61%) (N=71) indicating sampling from the central line being covered. However, for each of the last three activities, approximately 25% (18–20 respondents) (N=71) did not believe their actions were covered by the scope of practice despite them performing the activity.

This view may be related to the presence of registered nurses employed by the private laboratories to draw specimens from patients. However, in the context of the critical care unit, these registered nurses are often not familiar with the myriad of invasive lines used or complexities related to the drawing of specimens from these lines. The person who has experience and training in the use, function and dangers of these lines is the critical care nurse. She or he would be the most appropriate person to draw specimens from these lines.

The laboratory nurse may use what appears to be the most straightforward approach to collect a specimen of blood – by puncturing a blood vessel. Withdrawing the specimen correctly from an invasive line would be less distressing for the patient and may be safer in the context of the patient's clinical condition, for example if the patient has developed a

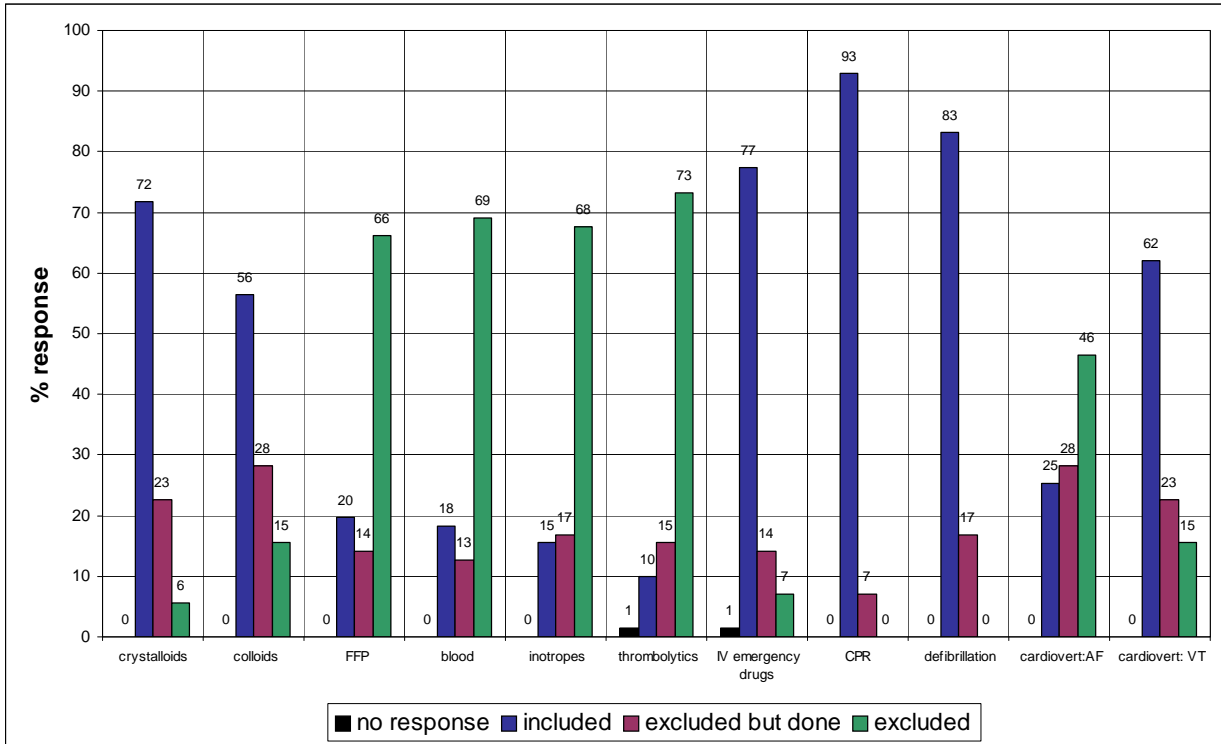
coagulation disorder. If the critical care nurse does not utilise her or his skill in managing this aspect of patient care, she or he may be neglecting her or his role of ensuring patient safety and comfort – two essential needs of any patient in a critical care unit, and both acknowledged to be part of the scope of practice of a critical care nurse in the private hospital environment.

4.3.2.3.6 Activities based on nursing assessment: initiate resuscitation

The activities from the questionnaire for discussion under this heading include activity 17 (17.1-17.4) and 18 (18.1-18.7).

FIGURE 4.16

Initiate resuscitation therapy without a medical prescription (N=71)



This grouping of data in Figure 4.16 reflects on various types of resuscitation that are performed in the care of a critically ill patient. These were:

- fluid replacement therapy;
- pharmacological therapy; and
- mechanical or electrical resuscitation.

The sample was specifically asked to consider whether they would implement any of these forms of therapy based only on their nursing assessment of a patient without a medical prescription.

Fluid replacement therapy

The first four columns of the graph display data related to fluid replacement therapy. Fifty-one respondents (72%) (N=71) indicated that initiating crystalloid fluid replacement to a patient based on their nursing assessment is covered by the scope of practice. Sixteen respondents (23%) (N=71) felt that, although the critical care nurse does this, the activity is not covered by the scope of practice. Only 40 respondents (56%) (N=71) considered that initiating a colloid fluid replacement based on nursing assessment would be covered by the scope of practice. Twenty respondents (28%) (N=71) indicated that this activity is not covered by the scope of practice, but is performed by the critical care nurse; and a further 11 respondents (15%) (N=71) indicated that this is not a nursing function. The disparity between an apparent willingness to initiate crystalloid fluid replacement but not colloid fluid replacement is difficult to understand. Fluid management is an important component of total patient management in the critical care unit and understanding the action and application of each of these fluid groups is essential to provide quality patient care. This is a subject that should form part of a critical care programme and thus the registered critical care nurse should be knowledgeable about how to use either of these types of fluid if needed, based on her or his nursing assessment of the patient. This does not need to extend to an emergency situation. Should the nurse identify in the process of a physical assessment that the fluid balance status of her patient has changed, it is reasonable to expect that she or he would be able to identify the patient's requirements. Dependant on the urgency of the patient's clinical status, she or he should be able to initiate appropriate fluid therapy and discuss her or his findings with the attending doctor.

With reference to the initiation of fresh frozen plasma and blood transfusion based on nursing assessment, the majority of the sample in both cases indicated that they do not consider this a nursing function. Forty-seven respondents (66%) (N=71) responded thus to the initiation of a fresh frozen plasma transfusion and 69% (49 respondents) (N=71) in

relation to the initiation of blood transfusion. The respondents stated in both cases that the attending doctor should perform these activities. This view is alarming because transfusions of blood and blood products are not activities to be taken lightly since, in effect, a tissue transplant is being given. However should a patient's condition deteriorate, for example, the patient begins to haemorrhage severely from a wound, it would be reasonable to expect the critical care nurse to determine the need for blood volume replacement and then to initiate this appropriately. The critical care nurse is trained to recognise the clinical indicators of hypovolaemia, to determine the cause and to know how to remedy the situation based on the knowledge gained from specialised theoretical and clinical preparation. The critical care nurse should be expected to be able to manage such emergencies until medical assistance is available.

Pharmacological therapy

The following three columns relate to initiating pharmacological therapy based on nursing assessment.

Inotropes are used in the care of a critically ill patient to achieve and then maintain adequate cardiac output to perfuse tissues. They achieve this through supporting cardiac muscle function or altering the tone of the vascular system. The majority of the sample, (48 respondents) (68%) (N=71) indicated that they do not think that initiation of inotropic therapy based on nursing assessment is covered by the scope of practice.

The opinion of the sample was similar when applied to the initiation of thrombolytic therapy, with 52 respondents (73%) (N=71) indicating that they do not consider this to be a nursing function.

Initiation of these therapies based on nursing assessment falls quite securely into that grey area of critical care nursing. Both of these groups of drugs have far-reaching physiological effects when initiated for a patient. Inappropriate application of these drugs will have serious consequences for the patient. The overwhelming opinion of the respondents to exclude the initiation of these drugs based on nursing assessment from the scope of a critical care nurse's practice is reasonable. However, if these drugs are initiated after a

telephonic prescription based on the critical care nurse describing her or his assessment of the patient's condition to the doctor, is this any different to initiation based on nursing assessment? The doctor is relying on the ability of the critical care nurse to accurately assess and clearly describe the patient's clinical condition to assist her/him (the doctor) in the decision to prescribe the therapy. The critical care nurse still initiates the infusion of the drug thereby accepting responsibility for her or his assessment, ability to communicate that assessment with clarity and the complexity of the patient-infusion interaction based on a telephonic prescription where the doctor has not assessed the patient. The responsibilities here are enormous and perhaps go some small way to describing the tremendous importance of a properly prepared, clinically astute, knowledgeable critical care nurse. If the critical care nurse excludes the initiation of these drugs from her or his scope of practice, then this should extend to not initiating these drugs unless the responsible doctor has assessed the patient.

When asked about the administration of emergency drugs with the specific examples of adrenaline and atropine, the majority of the sample (55 respondents) (77%) (N=71) indicated that initiating this therapy would be covered by their scope of practice. Ten respondents (N=71) did not think the scope of practice would cover their actions although they do this activity, and five respondents do not consider administering emergency drugs to be part of the critical care nurse's activities. Nel (1993) confirms that the functions of the critical care nurse in an emergency do extend to the administration of emergency drugs.

Mechanical or electrical resuscitation

The remaining four columns relate to the mechanical or electrical resuscitation of a patient.

Sixty-six respondents (93%) show that cardiopulmonary resuscitation is covered by their scope of practice, a further 49 (83%) (N=71) include defibrillation in this category. Despite these high percentages of respondents agreeing that these activities are included in the scope of practice, it is a concern that not all respondents agree. The remaining respondents in both activities stated that these fall into the category of being performed by the critical care nurse, but not included in the scope of practice. The ability to perform

advanced life support skills (cardiopulmonary resuscitation with defibrillation) is essential in the armoury of the critical care nurse. Nel (1993:209) confirms this by stating that the critical care nurse must be able to act in an emergency situation and specifically support the circulation by use of external cardiac massage and defibrillation.

However, when deciding to cardiovert a patient based on nursing assessment, the sample was less convinced these activities would be covered by the scope of practice. Eighteen respondents (25%) (N=71) indicated that cardioverting a patient in atrial fibrillation based on nursing assessment would be covered by the scope of practice. Twenty respondents (28%) (N=71) indicated that, although the critical care nurse performs this activity, the scope of practice would not protect the nurse, but 33 respondents (46%) (N=71) indicated that this is not a nursing function. This opinion may be due to the respondents' view as to whether a patient who has developed atrial fibrillation is regarded as an emergency or not. During specialist training, the critical care nurse is taught to use a defibrillator whether cardioverting or defibrillating a patient, and therefore this is included in the skill set of a critical care nurse. However, the part of the question that seems to define the response to this activity is that it is based on nursing assessment, which appears to be a stumbling block. When the respondents could interpret the question as referring to an emergency, they included the activity as part of their scope of practice. However, when they are unsure about whether the activity could be interpreted as an emergency, they either indicated the second option or the option that the activity is not part of their scope of practice. The respondents seem to lack confidence in their own ability to assess and then interpret their assessment and act on this. More in-depth investigation of this would be valuable in determining if this is indeed the correct interpretation of the respondents' opinion.

Forty-four respondents (62%) (N=71) stated that cardioverting a patient in ventricular tachycardia based on nursing assessment would be covered by the scope of practice, with 11 (15%) (N=71) indicating that this is not a nursing function. This activity is regarded as part of resuscitation skills where a patient who develops a ventricular tachycardia with a palpable peripheral pulse should be cardioverted and not defibrillated. This may explain

why the respondents were more likely to include this activity as acknowledged in the scope of practice.

4.3.2.3.7 Activities based on nursing assessment: administer drugs

The activities from the questionnaire for discussion under this heading include activity 22 (22.1-22.12).

The administration of medication to a critically ill patient forms a significant part of any nurse's shift. In certain situations based on the nurse's assessment of the patient, it could be necessary for the critical care nurse to administer drugs without a prescription from a doctor. Nel (1993) states, "*Die intensiewe verpleegkundige se professioneel-etiese magtiging stel haar in staat om probleme te voorspel, te herken en te prioritiseer. Probleemoplossing op haar eie kan haar buite haar wetlike riglyne laat optree, soos byvoorbeeld die toediening van medikasie sonder 'n geneesheerversoek.*"

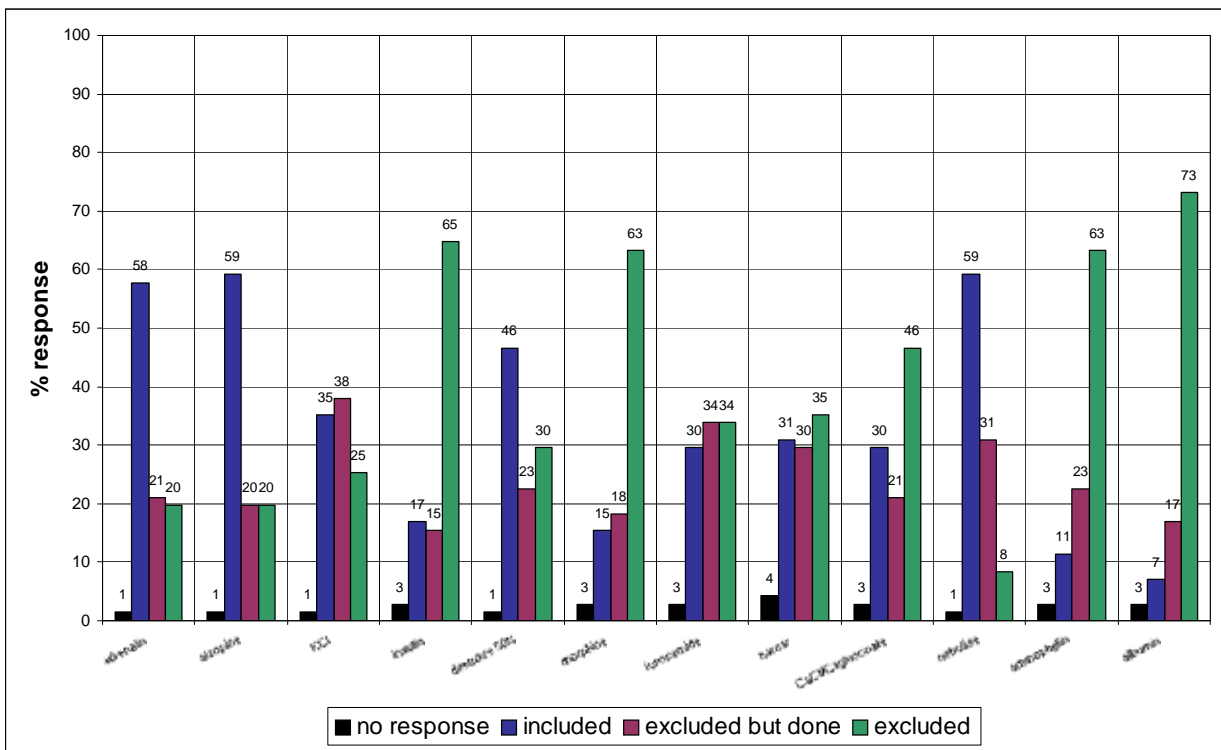
Under this question, the respondents were asked to consider whether the administration of the listed drugs based solely on their nursing assessment would be covered by the scope of practice. Based on the opinion of critical care nurse specialists, Nel (1993) identified the following as medications a critical care nurse must be able to prescribe and administer in an emergency situation:

- Electrolytes
- Antidysrhythmics
- Analgesia
- Bronchodilators
- Positive inotropes
- Diuretics

The examples of drugs provided in the questionnaire are used regularly in the therapeutic management of the critically ill patient. The researcher wanted to discover which of these drugs the respondents would consider administering to the patient based on their nursing assessment without first obtaining a prescription from a medical colleague and still feel they were functioning within their scope of practice.

FIGURE 4.17

Administer drugs without medical prescription (N=71)



The data shown graphically in this section are related to the opinion of the critical care nurse with respect to the administration of various drugs to a critically ill patient based on nursing assessment and without a medical prescription (see Figure 4.17).

Forty-one respondents (58%) (N=71) and 42 respondents (59%) (N=71) of the sample respectively indicated that administering Adrenaline and Atropine intravenously based on nursing assessment is covered by the scope of practice. Approximately 20% of the sample (N=71) in both instances indicated that, although critical care nurses do administer these drugs without a medical prescription, the scope of practice would not support these activities, and a further 20% (N=71) in each case indicated that administering these drugs without a medical prescription is not a nursing function. This is particularly interesting in the light of the opinion in the section discussed above where 77% of the sample (N=71) indicated that initiating therapy with emergency drugs, in particular Adrenaline and Atropine, is covered by the scope of practice. One again must consider whether it is the defining word 'emergency' that has played the dominant role in their categorisation. In this question, there was no mention of 'emergency'; merely whether administering these drugs intravenously based on nursing assessment would be covered by the scope of practice.

Potassium chloride is a drug used regularly in the care of patients to maintain cardiac rhythm stability. The sample of critical care registered nurses was particularly divided in their opinion related to this drug. Twenty-five respondents (35%) (N=71) indicated that the scope of practice would cover their administration of Potassium chloride without a medical prescription. Twenty-seven respondents (38%) (N=71) felt that, although the nurse does perform this activity, it would not be covered by the scope of practice, and 18 respondents (25%) (N=71) indicated that this is not a nursing activity. If a patient is hypokalemic, they are at risk for developing life-threatening dysrhythmias and as such it is important that the critical care nurse recognises the significance of the laboratory result. She or he should act on this by requesting medical intervention to identify the cause of the problem and to correct the electrolyte imbalance. She or he should also have the necessary knowledge and skill to correctly locate, mix and administer the drug safely.

The majority of the sample, (46 respondents) (65%) (N=71) indicated that administration of intravenous insulin based on nursing assessment alone is not a function of the nurse.

Thirty-three respondents (46%) (N=71) felt that administering Dextrose 50% intravenously based on nursing assessment would be covered by the scope of practice, with 23% (N=71)

indicating the scope of practice would not cover this activity and 30% (N=71) excluding this from a nurse's functions. The administration of Dextrose 50% can be regarded as an emergency measure when a patient develops severe hypoglycaemia as this may have serious neurological sequelae. Thus, if the critical care nurse identifies the patient is hypoglycaemic after a nursing assessment, it would be reasonable for her/him to administer this drug. However, once again she or he must ensure that her or his knowledge and skill are commensurate with the level of the activity. The nurse must know how to determine the dose required, how to administer the dose correctly and safely and how to manage the patient during and after the administration.

Forty-five respondents (63%) (N=71) indicated that administration of morphine intravenously based on nursing assessment alone is not a function of the nurse, a doctor must prescribe this. This is a scheduled drug and a prescription is required prior to administration of this medication.

Administration of Furosemide and Nalaxone hydrochloride (Narcan) also indicates a divided opinion.

With respect to Furosemide, 21 respondents (30%) (N=71) felt administration of this drug based on nursing assessment is part of the scope of practice of a critical care trained registered nurse. Twenty-four respondents (34%) (N=71) indicated that this activity would not be covered by the scope and a further 24 respondents (34%) (N=71) indicated that this is not a nursing function.

Twenty-two respondents (31%) (N=71) indicated that administration of Nalaxone hydrochloride is within the parameters of the scope of practice, but 21 respondents (30%) (N=71) indicated that this would fall outside the scope of practice despite critical care nurses fulfilling this function. Twenty-five respondents (35%) (N=71) indicated that this is not a nursing function.

Thirty-three respondents (46%) (N=71) indicated that administration of calcium chloride or calcium gluconate based on nursing assessment is not a nursing function, with 21 respondents (30%) (N=71) of the opinion that this activity would be covered by the scope of practice.

Forty-two respondents (59%) (N=71) supported administration of a nebuliser to a patient based on nursing assessment as being part of the scope of practice. Twenty-two respondents (31%) (N=71) viewed this activity as outside the scope of practice although critical care nurses are performing this activity. This response can only be seen in the light of the use of nebulisation as a method of administration as no particular drug was specified in the questionnaire.

Forty-five respondents (63%) (N=71) indicated that administration of an aminophyllin infusion based on nursing assessment alone is not a function of the nurse.

Fifty-two respondents (73%) (N=71) indicated that administration of an albumin infusion based on nursing assessment alone is not a function of the nurse. Albumin was included in this question as this fluid is still used in the private sector as a supplement by some doctors for low serum albumin levels.

The respondents provide a mixed opinion related to the administration of drugs based on nursing assessment alone without a medical prescription. It appears that, if the drug could be readily considered necessary in an emergency, the respondents are more likely to indicate that this would be covered by their scope of practice. However, if the drug does not fall into this grouping, then the respondents are less likely to indicate that the scope of practice would cover this activity. Nel notes (1993) that, with the exception of the administration of electrolytes, the experts in the study stated that it is only in emergency situations that the critical care nurse may prescribe medication or alter dosages.

The opinion of the respondents in this study is supported in some respects by that of the experts in Nel's work (1993), since the respondents would administer electrolytes (Potassium chloride), antidysrhythmics (Atropine), positive inotropes (Adrenalin) and diuretics (Furosemide). However, the respondents disagreed with the administration of

analgesia (morphine), bronchodilators (aminophyllin) and certain electrolytes (calcium gluconate/chloride).

It must also be considered here that the opinions expressed may also be related to the individuals' knowledge of the specific drugs listed. In the researcher's experience, a critical care nurse's knowledge of pharmacology and specific drugs is usually poor. In the light of this, the data here can be interpreted to mean that the critical care nurse is confident in her or his knowledge of the administration of specific drugs because these are general medications used most frequently.

If one accepts a cut-off of two-thirds of the sample (46 and more respondents) indicating that administration of these drugs based on nursing assessment alone (i.e. respondents choosing column 1 or 2 in the questionnaire) is an activity performed by the critical care nurse, then it is clear that only adrenaline, atropine, potassium chloride, dextrose 50% and administering a nebuliser fall into this grouping. This could show that these are the medications with which the nurse is most familiar and therefore would feel competent in administering without a medical prescription. Furosemide and Narcan fall just outside this grouping but could be interpreted in a similar light.

Those drugs that have a two-thirds majority excluding their administration from critical care nurse activity based solely on nursing assessment include insulin, morphine, calcium gluconate/chloride, aminophyllin and albumin. With the exception of morphine, which has been discussed previously, the critical care nurse may not be as regularly exposed to administration of these. She or he may therefore not have confidence in her or his knowledge or competence related to these particular medications. This is an appropriate response as it acknowledges the accountability and responsibilities attached to the administration of drugs, whether prescribed or not. It also emphasises the need for the critical care nursing fraternity to update and maintain their knowledge of pharmacology.

4.3.2.3.8 Activities based on nursing assessment: adjust infusion rates

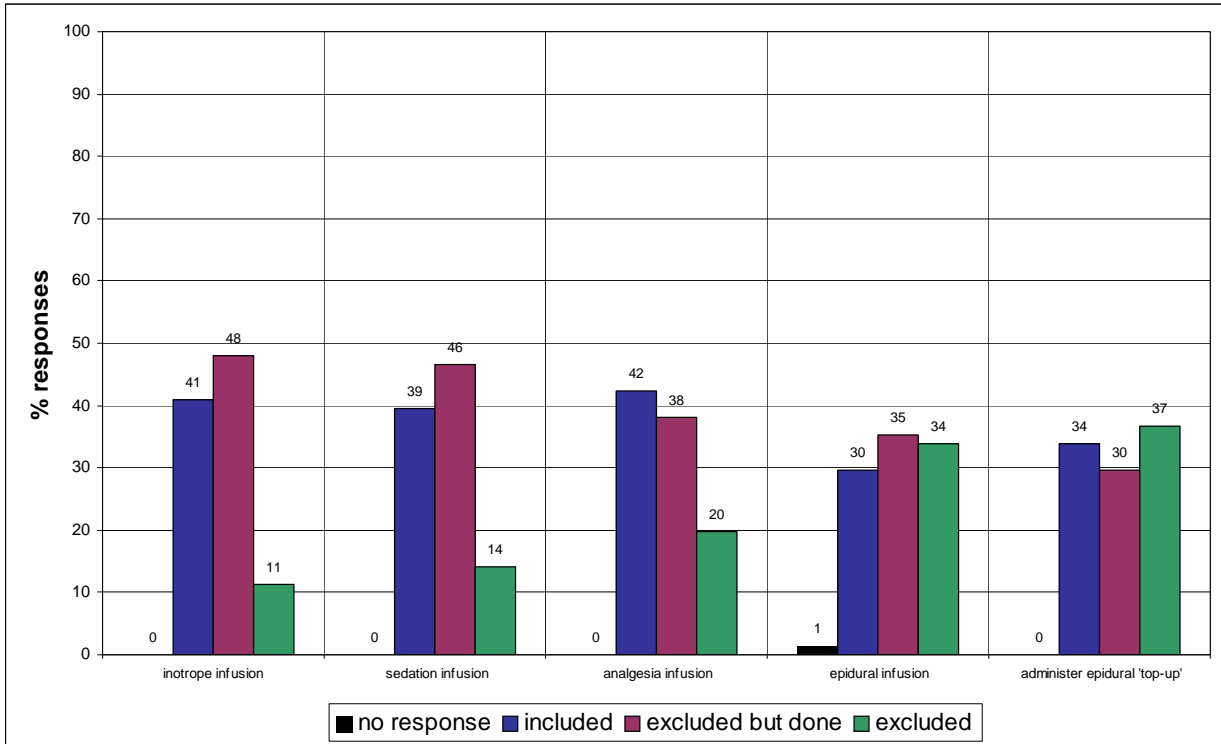
The activities from the questionnaire for discussion under this heading include activity 23 (23.1-23.4) and 24.

Many of the medications administered to the critically ill patient to support organ function or to assist in patient comfort are given as intravenous infusions. These infusions often require titration of the infused dosages against the patient's response to the medication or physiological changes by increasing or decreasing the rate at which the medication is infused.

The data depicted in Figure 4.18 indicate the opinion of the critical care registered nurse related to titrating intravenous infusions against the response of the patient without a medical prescription for the titration. It also shows their opinion as to whether the critical care nurse considers 'topping up' epidural analgesia to be covered by the scope of practice. This activity was included here as 'topping up' an epidural infusion involves increasing the concentration (and, in effect, the rate) of the medication based on the patient's needs.

FIGURE 4.18

Adjust infusion rates (N=71)



The sample appears to indicate that adjusting infusion rates without a medical prescription is an activity performed by the critical care nurse, but that this would not be covered by the scope of practice.

More specifically, almost half of the sample were of the opinion that adjusting inotrope infusions (34 respondents) (48%) (N=71) and adjusting sedation infusions (33 respondents) (46%) (N=71) are not covered by the scope of practice despite this being an activity performed by the critical care nurse. Thirty respondents (42%) (N=71) indicated that adjusting an analgesia infusion is covered by the scope of practice, with 28

respondents (38%) (N=71) showing that the nurse performs this activity, but would not be covered by the scope of practice.

As mentioned previously, it does appear that these are activities that are performed by the critical care nurse and there is uncertainty as to whether the scope of practice provides for the critical care nurse to titrate these infusions if no medical prescription has provided for it. The scope of practice requires that a nurse should execute a programme of treatment or medication prescribed by a registered person for a patient, administer medication and monitor the patient's reaction to the medication. This implies that, based on the critical care nurse's specialist training and knowledge, she or he is acknowledged to have an in-depth understanding of the medication characteristics, its likely effects on the patient, the ability to administer the drug and monitor the response from the patient. The in-depth knowledge would extend to knowing the range of safe intravenous dose administration, specific patient assessment data interpretation related to the medication and knowing when to call medical assistance.

The sample is divided over whether the scope of practice would cover the nurse adjusting epidural infusion rates without a medical prescription. Twenty-one respondents (30%) (N=71) indicated that this activity would be covered. Twenty-five respondents (35%) (N=71) stated that the activity is performed by the critical care nurse but would not be covered by the scope of practice, and 24 respondents (34%) (N=71) stated that this is not a nursing function.

Similarly, the administration of an epidural 'top-up' divided the respondents. Twenty-four respondents (34%) (N=71) were of the opinion that the scope of practice does cover this activity, with 30 respondents (21%) (N=71) unsure that their practice is acknowledged by the scope of practice. Twenty-six respondents (37%) (N=71) excluded this from critical care nurses' activities. This response may be influenced by some of the private hospitals having policy in place that places this activity in the hands of the anaesthetist who inserted the epidural line. This policy developed from confusion as to whether administering an epidural top-up did form part of a nurse's skills or a doctor's skills. The South African Nursing Council does view epidural analgesia to be part of a nurse's scope of practice, but

emphasises that the nurse must have the necessary competence and knowledge and be accountable for acts and omissions. Therefore, should the critical care nurse be required to care for patients with epidural analgesia *in situ* and administer 'top-ups' via this catheter, she or he must have proof of knowledge and competence in this activity and accept responsibility and accountability for her or his actions.

4.3.2.3.9 Treatment plans

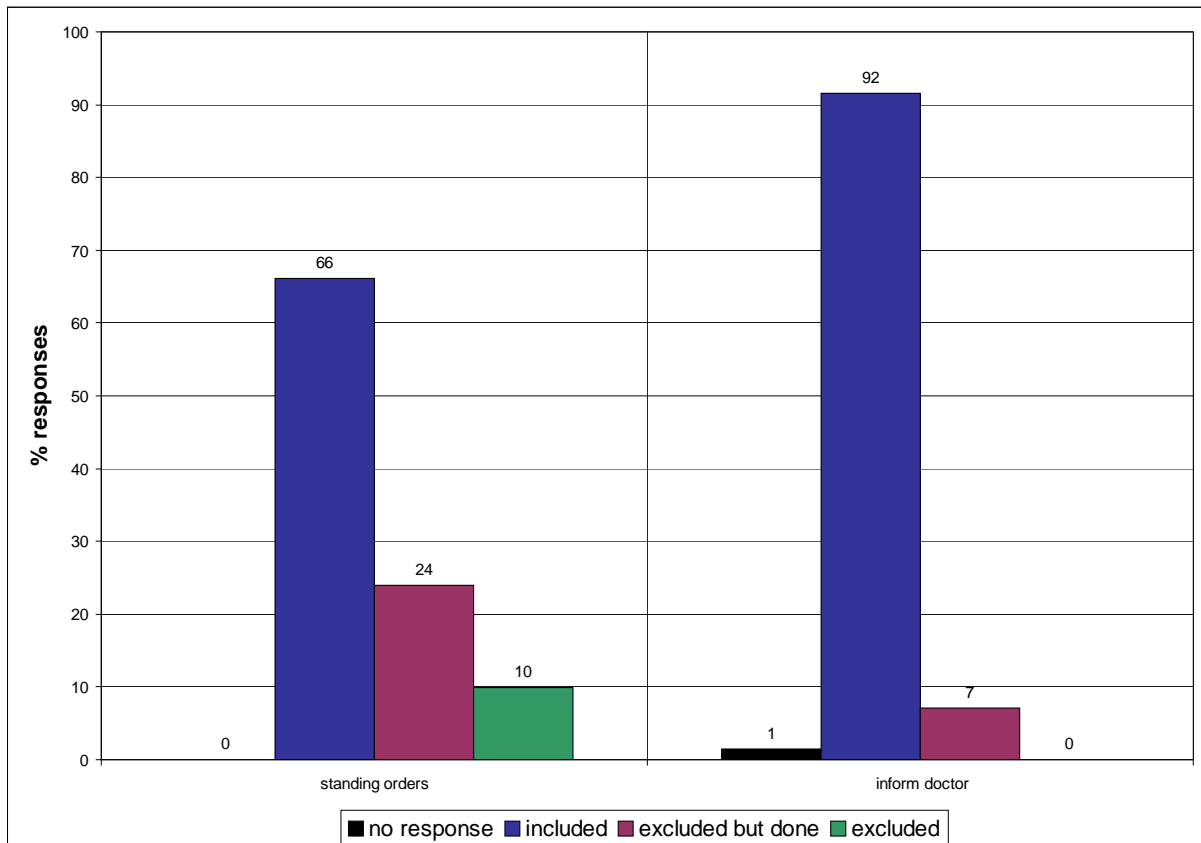
The activities from the questionnaire for discussion under this heading include activity 25 and 26.

The scope of practice requires that the nurse execute a programme of treatment or medication prescribed by a registered person for a patient. An anomaly related to this responsibility is the use of 'standing orders' in the private sector.

'Standing orders' or generic prescriptions are medical prescriptions for a particular type of treatment that should be implemented by the nurse when the patient exhibits a particular set of clinical signs.

FIGURE 4.19

Treatment plans



Forty-seven respondents (66%) (N=71) were of the opinion that administering any drug according to a standing order is covered by their scope of practice. Seventeen respondents (24%) (N=71) indicated that standing orders are implemented but would not be covered by the scope of practice, and seven respondents (10%) (N=71) indicated that implementing standing orders related to drug administration is not a nursing function.

The South African Nursing Council issued a policy statement in 1993 concerning standing prescriptions and stated that the standing prescription is a medical prescription issued and signed by a medical practitioner where routine administration of certain medications is required in specific non-emergency patient care situations. It furthermore states that a

standing prescription does comply with the requirements of a legally valid prescription and that nurses who implement such prescriptions must ensure that medico-legal risks are minimised and the prescription individualised by specifying the patient's name and admission number on a copy of the standing prescription, which should be attached securely to the patient's prescription chart and signed and dated by the prescribing doctor at the earliest opportunity. The South African Nursing Council was contacted to establish whether any updated statements had been made with regard to the implementation of standing orders ('generic prescriptions') by registered nurses. The Registrar of this council replied that this falls outside the jurisdiction of the South African Nursing Council. Performing a computer-based literature search about this subject yielded very little concrete information, other than that the standing order must comply with all legal requirements of an individual prescription. In addition to this, a master copy of the standing order with the doctor's signature on it must be available where the order is to be implemented. There must be evidence that the order is reviewed regularly and, during a discussion on this subject, one expert suggested this should be done monthly. Outdated orders must be removed immediately with a system in place to inform all staff about the change. Pre-printed standing orders must be individualised with the patient's details and signed by the doctor at the time of implementation. The order must be available in the patient's file. It is also recommended that the doctor indicate the implementation of the standing order in the specific patient's prescription chart.

Ninety-two per cent (65 respondents) (N=71) indicated that reporting any changes made to prescribed treatment to the attending doctor is within the scope of their practice. However, five respondents indicated that the scope of practice would not cover this activity, which is interesting because the registered nurse does have a responsibility to report changes in the patient's condition and thus changes in the prescribed treatment to the attending doctor. Verschoor *et al.* (1997) point out that even where a doctor has left no specific orders, a nurse is expected to report any significant changes in the condition of a patient. Keeping the doctor informed about the patient's clinical status is regarded as good nursing practice, which is particularly important when the doctor is not immediately available. Regular discussion of appropriate patient data will promote quality nursing care and can

improve the nurse-doctor relationship as these colleagues then build up a working relationship based on acknowledgement of each others skills.

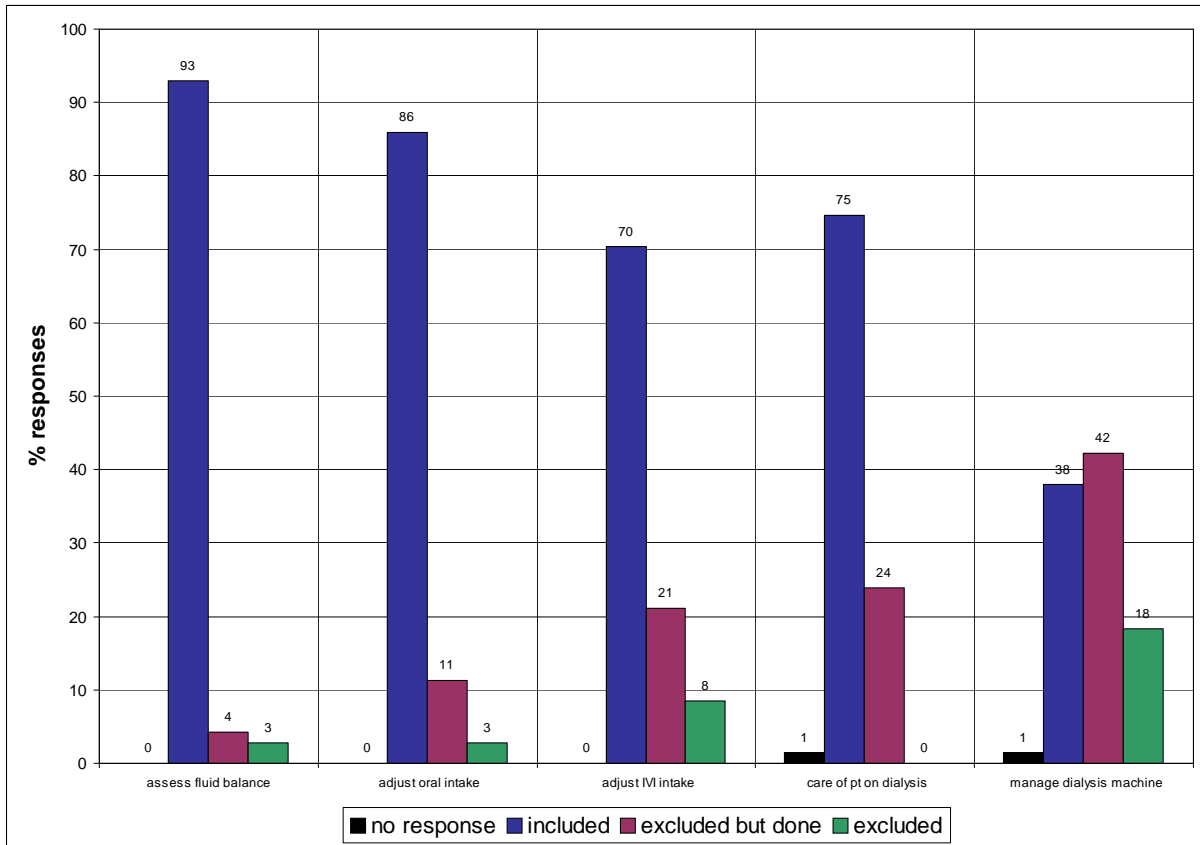
4.3.2.3.10 Activities based on nursing assessment: fluid balance management

Between 55% and 60% of an average human body is water, the major constituent. Achieving and maintaining the correct fluid balance is vital, as imbalances will affect every body system. Searle and Pera (1995) comment that it is a fundamental duty of the registered nurse to maintain fluid balance in a patient.

The activities from the questionnaire for discussion under this heading include activity 32 (32.1-32.13), 33 and 34.

FIGURE 4.20

Fluid balance management (N=71)



The data depicted in Figure 4.20 display the opinion of the critical care registered nurse with respect to fluid management of a patient.

Sixty-six respondents (94%) (N=71) indicated that assessing a patient’s fluid balance status is covered by the scope of practice. Sixty-one respondents (86%) (N=71) indicated that adjusting oral fluid intake based on nursing assessment would be covered by their scope of practice and 56 respondents (70%) (N=71) indicated the same regarding adjustment of intravenous fluid intake. From this data it appears that the critical care nurse

will assess the patient's fluid status, but has some reservations as to whether acting on this assessment would be included in their scope of practice. Even though Scribante *et al.* (1995) note that the critical care nurse must be able to assess hydration status clinically and with available technology, they do not clarify what the role of the nurse would be in responding to the assessment data. Where either hypovolaemia or hypervolaemia compromises the patient's condition, the critical care nurse must be able to identify the cause and possible remedies to this in order to prevent patient collapse. This view is supported by Searle and Pera (1995), who confirm that nurses must initiate intravenous fluid replacement in an emergency in the absence of a doctor.

Dialysis is a form of fluid balance management for patients who are unable to maintain adequate kidney function. Fifty-three respondents (75%) (N=71) indicated that caring for a patient receiving dialysis is covered by their scope of practice, but only 27 respondents (38%) (N=71) indicated the same about managing the dialysis machine. Thirty-two respondents (42%) (N=71) indicated that this activity is performed by the critical care nurse but is not covered by the scope of practice, and 13 respondents (18%) (N=71) indicated that this is not a nursing function and should be performed by a technician.

In the private healthcare sector, external companies who employ expert dialysis technicians usually provide dialysis services. These companies will usually bring in all the equipment and fluids required for the procedure of dialysis (in whichever form it is to take), set the machine up and begin the procedure. Depending on the length of time the procedure will take, a dialysis technician may not always be available on the premises to manage the dialysis machine. This leaves the patient and machine in the hands of the critical care nurse.

Nel (1993) includes haemodialysis as an advanced procedure that a critical care nurse is expected to be able to carry out safely and successfully, with the proviso that she or he has the necessary knowledge and competency to do so. Therefore, in private hospitals where there are no 'renal sisters', it would be within the scope of the critical care nurse's practice to care for a patient on dialysis and manage the dialysis machine. In-service training would give the nurse the opportunity to fill any gaps in knowledge or skill.

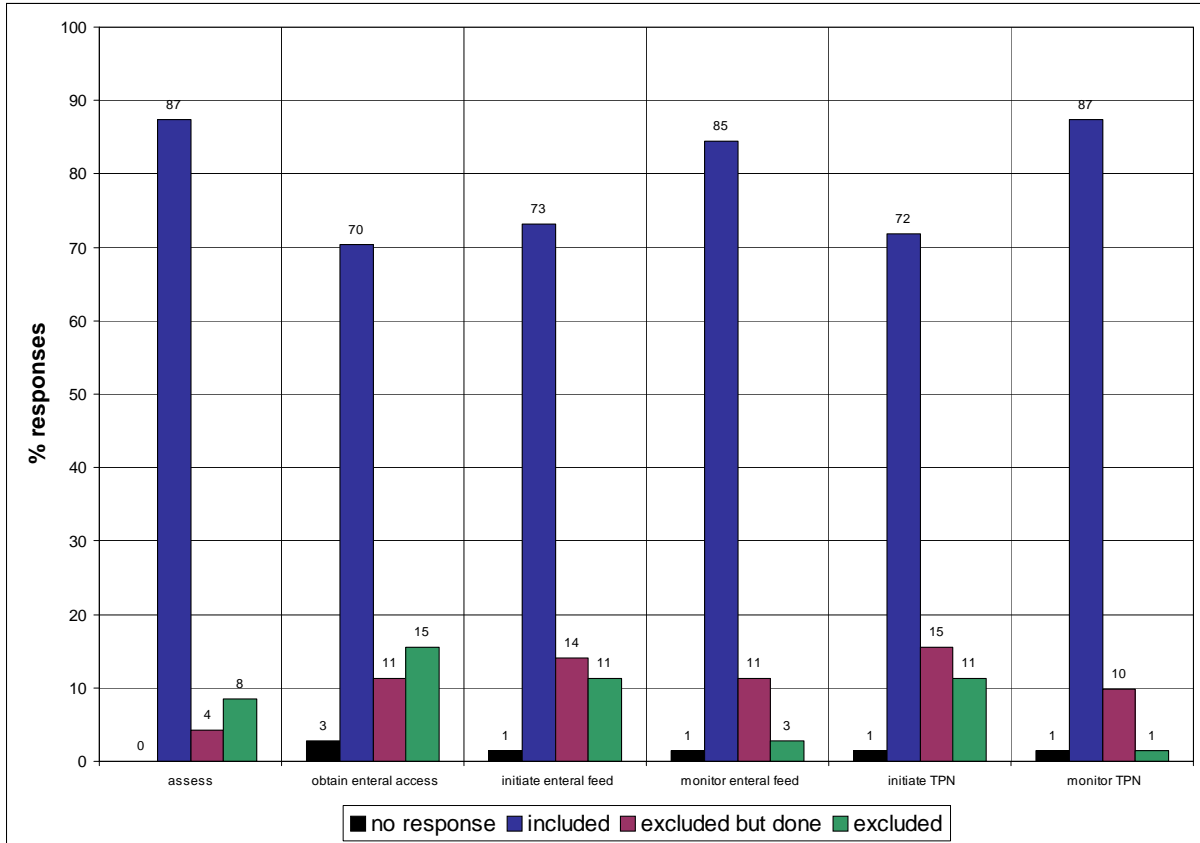
4.3.2.3.11 Nutrition

According to Woodrow (2000) nutrition is fundamental to health, but states that Nightingale's claim of patient starvation in hospitals still has some validity. The critical care nurse has an important role to play in nutritional management for her or his patient as poor nutrition has been shown to influence wound healing, skin integrity, development of complications, lengthened hospital stay and death (Swearingen & Keen, 2001; Urden, Stacy & Lough, 2002).

The activities from the questionnaire for discussion under this heading include activity 35 (35.1-35.6).

FIGURE 4.21

Nutritional management (N=71)



This graph depicts data related to the nutritional management of a patient (Figure 4.21).

The majority of the sample indicated that assessing the nutritional status of a patient (87%) (N=71) and the monitoring of enteral (85%) (N=71) or total parenteral feeds (87%) (N=71) are part of their scope of practice. However, activities related to obtaining enteral access and then initiating enteral or parenteral feeds had higher numbers of respondents indicating that these are not nursing activities.

Sixty-two respondents (N=71) agreed that nutritional assessment of their patient is part of their scope of practice, and six respondents (8%) (N=71) excluded this activity from the nurse's functions. This may be due to the inclusion of the agency nurses in the sample who are employed in state critical care units. In these units, a dietician performs a full nutritional assessment of a patient. This is seldom the case in the private sector, although it does appear to be gaining appeal in the recent past. The critical care nurse has to perform a simple nutritional assessment of her or his patient to ensure appropriate feeding and nutritional support.

Obtaining enteral access is covered by the scope of practice in the opinion of 50 respondents (70%) (N=71), although 11 respondents (15%) (N=71) did not support this activity as a nursing function. Insertion of nasogastric tubes is taught as part of the undergraduate or basic programme and the critical care nurse should be competent in this activity. However, in private critical care units the insertion of fine-bore enteral feeding tubes is usually limited to medical personnel only, apparently due to the risk of perforation of the gastrointestinal mucosa. This may be the reason for the higher percentage of respondents excluding this as a nursing activity.

Fifty-two respondents (73%) (N=71) indicated that initiating enteral nutrition and 51 respondents indicated initiating parenteral nutrition (72%) (N=71) would be covered by the scope of practice. In both of these activities, about 15% of the sample (N=71) felt these activities would not be covered by the scope of practice despite the critical care nurse doing them, and 11% (N=71) of the sample excluded this from nursing activities.

Sixty respondents (85%) (N=71) agreed that monitoring a patient receiving enteral feeding would be within their scope of practice, and 62 respondents (87%) (N=71) agreed that total parenteral feeding was within their scope. Again about 10% of the respondents (N=71) were not sure that these two activities would be covered by their scope of practice.

The scope of practice clearly states that the nurse has a responsibility to facilitate, maintain and improve the nutritional status of a patient. Searle and Pera (1995) include oral, gastric and intravenous methods of feeding within this responsibility. Scribante *et al.* (1995) state

that the critical care nurse should know the advantages and disadvantages of whichever feed or method is chosen.

Research into the importance of nutrition in the critically ill patient in the recent past has resulted in this being an area of growth in critical care nursing. In order to provide quality nursing care, this is an area where the critical care nurse must update her or his knowledge and skills.

4.3.2.3.12 Assisting with diagnostic or therapeutic interventions

The activities from the questionnaire for discussion under this heading include activity 27 (27.1-27.5).

FIGURE 4.22

Diagnostic and therapeutic interventions (N=71)

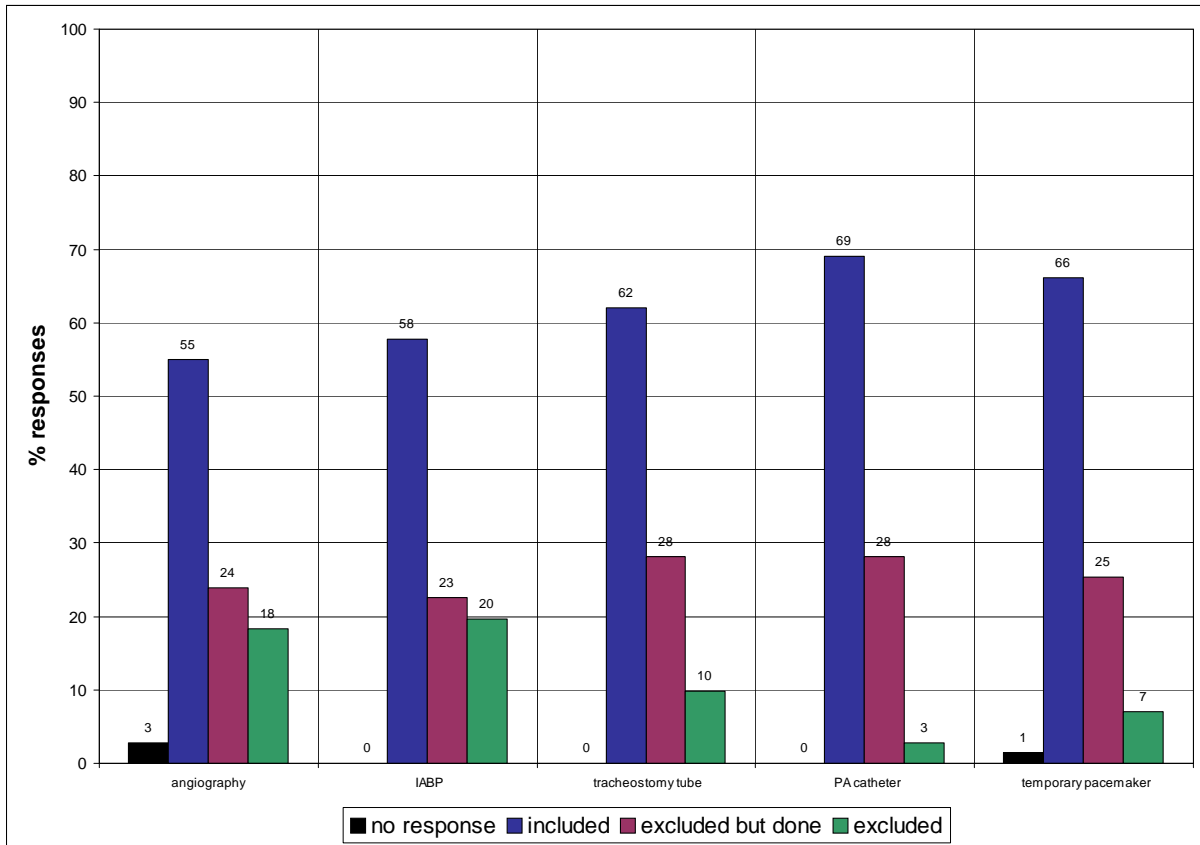


Figure 4.22 represents the opinion of the critical care trained registered nurse with respect to assisting a doctor with diagnostic or therapeutic interventions for a critically ill patient.

In each intervention shown above, approximately one-quarter (23-28%) (16-20 respondents) (N=71) indicated that the critical care nurse performs these activities, but would not be covered by the scope of practice.

Higher percentages of the sample similarly indicated that some of the following activities are not a nursing function: angiography (18%) (13 respondents) (N=71); intra-aortic balloon

pump (20%) (14 respondents) (N=71). They however indicated that these activities should be performed by a nurse working in that particular area, for example the cardiac catheterisation laboratory or operating theatre.

It would be valuable to determine whether the critical care nurse is the most appropriate person to be assisting with some of these interventions. Often the insertion of these devices, for example a temporary pacemaker or intra-aortic balloon pump, occurs during a severe deterioration in the patient's condition. The question that must be asked here is whether it is more appropriate for the critical care nurse to focus on the doctor's needs related to the insertion and functioning of a device or whether her or his focus should be the patient's on-going physiological and emotional needs. The critical care nurse often finds herself/himself responding to the immediate needs of the doctor, fetching and opening surgical supplies, holding instruments, etc., while the patient is forgotten beneath the green towels. Using a knowledgeable and competent critical care nurse in this role seems to be a waste of a valuable resource and it is perhaps in this role that a technician would be more useful. In this way, a person trained in that field can deal with the stress surrounding the machines and an expert in patient care can focus on the needs of the patient.

The critical care nurse should obviously be knowledgeable about these interventions and machines to be able to care for the patient during and after the procedure, and to assist during emergency insertion of various devices, but she or he is not always the most appropriate person, usually just the most convenient.

4.3.2.4 Therapeutic environment

Naudé *et al.* (1993) describe the therapeutic environment as the way in which a nurse provides an environment for her or his patient. These authors identify an environment where patients are free from medico-legal hazards and nosocomial infections, and are nursed in a clean and comfortable environment. The authors also comment on the characteristics of the nursing staff as being professional, having co-operative relationships

with all members of the multidisciplinary team, are knowledgeable and skilled and are able to deliver a high standard of nursing care and ensure optimum recovery of the patient.

This attention to the provision of a therapeutic environment is equally important in the critical care milieu as it is in any other healthcare environment. Woodrow (2000) argues that it is within the nurse's scope to promote, proactively and creatively, a therapeutic environment.

This grouping of data includes the following elements of the Scope of Practice (R2598) and activities from the questionnaire.

Table 4.4 summarises the data to be discussed in the grouping of therapeutic environment. The column on the left indicates which elements of the Scope of Practice (R2598) are included in this grouping. The column on the right shows which critical care activities from the questionnaire may be related to these particular elements of the Scope of Practice (R2598).

Table 4.4

Therapeutic environment

Element from the Scope of Practice (R2598)	Critical Care Activity (number indicates the number of the activity on the questionnaire)
(d) The prevention of disease and promotion of health and family planning by teaching and counselling individuals, families, groups of persons, and the community (n) The facilitation of communication by and with a patient, family, significant others, groups and communities (o) The facilitation of the attainment of optimum	13 - Switch off a ventilator when a patient is declared brain dead 30 - Short term rehabilitation of critically ill patients 36 - Infection control 40 - Create and maintain a therapeutic environment 41 - Move patient between departments

<p>health for the individual, the family, groups and the community</p> <p>(p) The establishment and maintenance of an environment in which the physical and mental health of the patient is promoted</p> <p>(r) The co-ordination, complementing and facilitating of the healthcare provided for the patient by other categories of health personnel</p> <p>(s) The provision of effective patient advocacy to enable the patient to obtain the healthcare she or he needs</p>	<p>43 - Staff management</p> <p>44 - Implementation of a living will</p> <p>45 - Provide information to a medical aid company regarding patient status</p> <p>46 - Participate in developing ICU admission criteria for critically ill patients</p> <p>47 - Assist family in deciding when treatment should be discontinued</p> <p>48 - Terminate treatment at the request of the family</p> <p>49 - Administer analgesia for purposes other than pain relief</p> <p>50 - Close ICU beds when there is a shortage of qualified nursing staff</p>
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Figure 4.23

Activities related to the therapeutic environment (N=71)

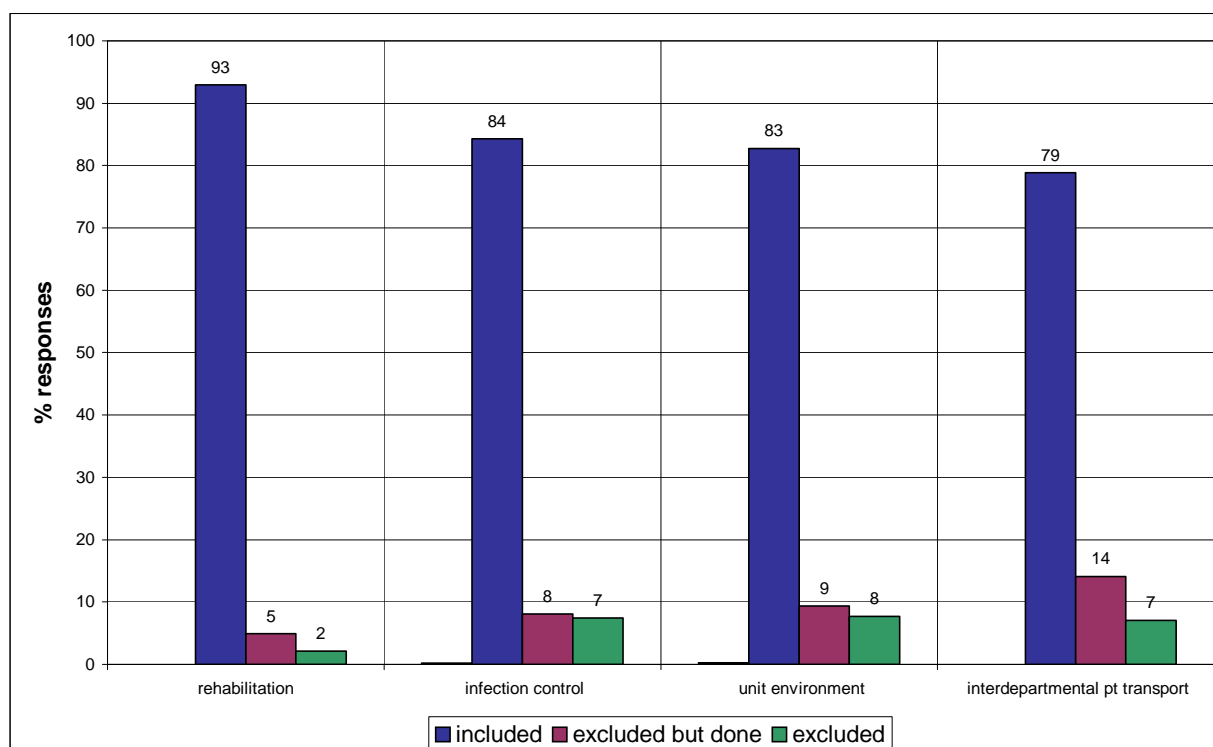


Figure 4.23 shows that 66 respondents (93%) (N=71) indicated that activities related to creating and maintaining a therapeutic environment are covered by the critical care nurse's scope of practice.

Each of the aspects investigated will be considered separately. Where further data was collected to clarify opinions, this will also be presented graphically.

4.3.2.4.1 Short-term rehabilitation

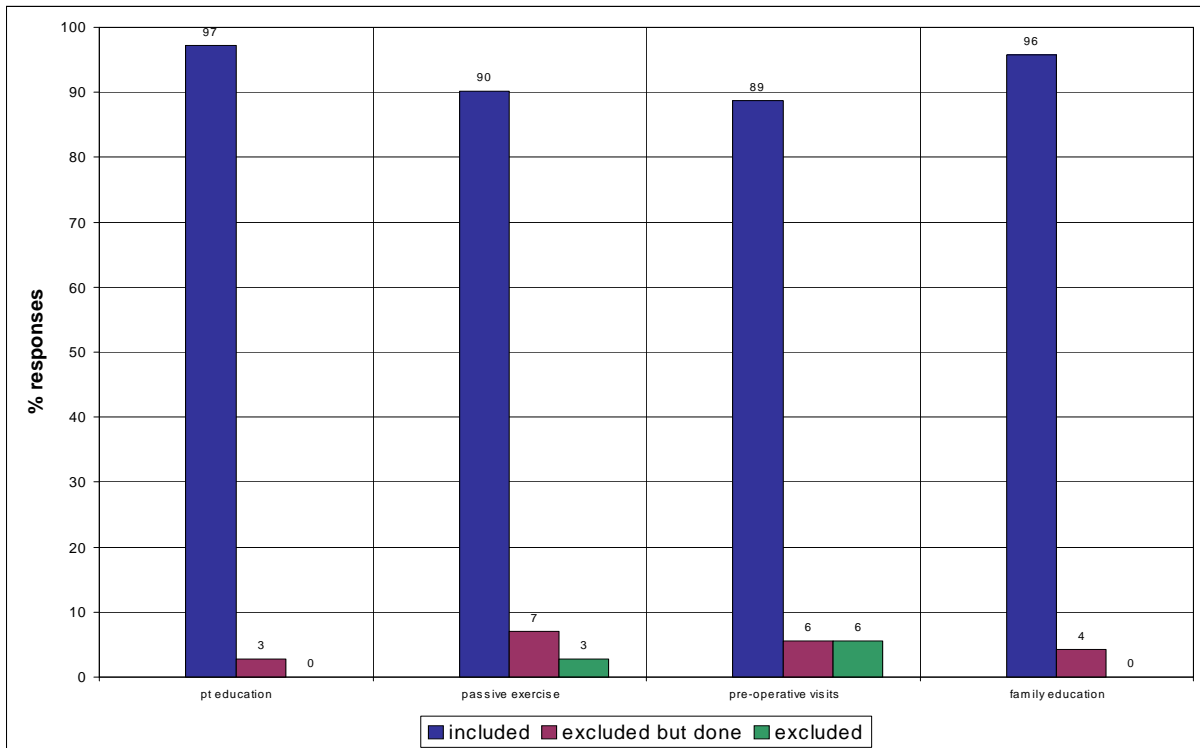
"This concept is not always associated with the high-tech critical care situation, but the critical care unit is one of the ideal situations to prevent disease and promote health and family planning. The patient and those close to him usually trust the critical care nurse and

respect her abilities; this promotes confidence which is essential for counselling and teaching” (Scribante *et al.*, 1995).

The activities from the questionnaire for discussion under this heading are activity 30 (30.1-30.4).

FIGURE 4.24

Rehabilitation (N=71)



As can be noted from Figure 4.24, the respondents in the sample indicated overwhelmingly (93%) (N=71) that aspects of nursing related to the short-term rehabilitation of a critically ill patient are covered by the scope of practice. These include patient education (69 respondents) (N=71), passive range of motion exercise (64 respondents) (N=71), pre-operative visiting (63 respondents) (N=71) and family education (68 respondents) (N=71).

Nel (1993) supports the activities of the critical care nurse related to patient and family education by pointing out that the critical care nurse has a legal and professional obligation to educate the patient and family in order to broaden their knowledge about the particular disease condition.

4.3.2.4.2 Infection control

Woodrow (2000) highlights the high costs of infection citing both human life costs as well as financial costs. This same author continues by arguing that while medication and interventions may reduce morbidity and mortality, prevention of infection remains preferable to these.

Infection control is of vital importance in the critical care unit as patients are physiologically vulnerable to infection due to compromised immune system functioning as a result of their underlying disease or disorder.

The activities from the questionnaire for discussion under this heading include activity 36 (36.1-36.7).

FIGURE 4.25

Infection control (N=71)

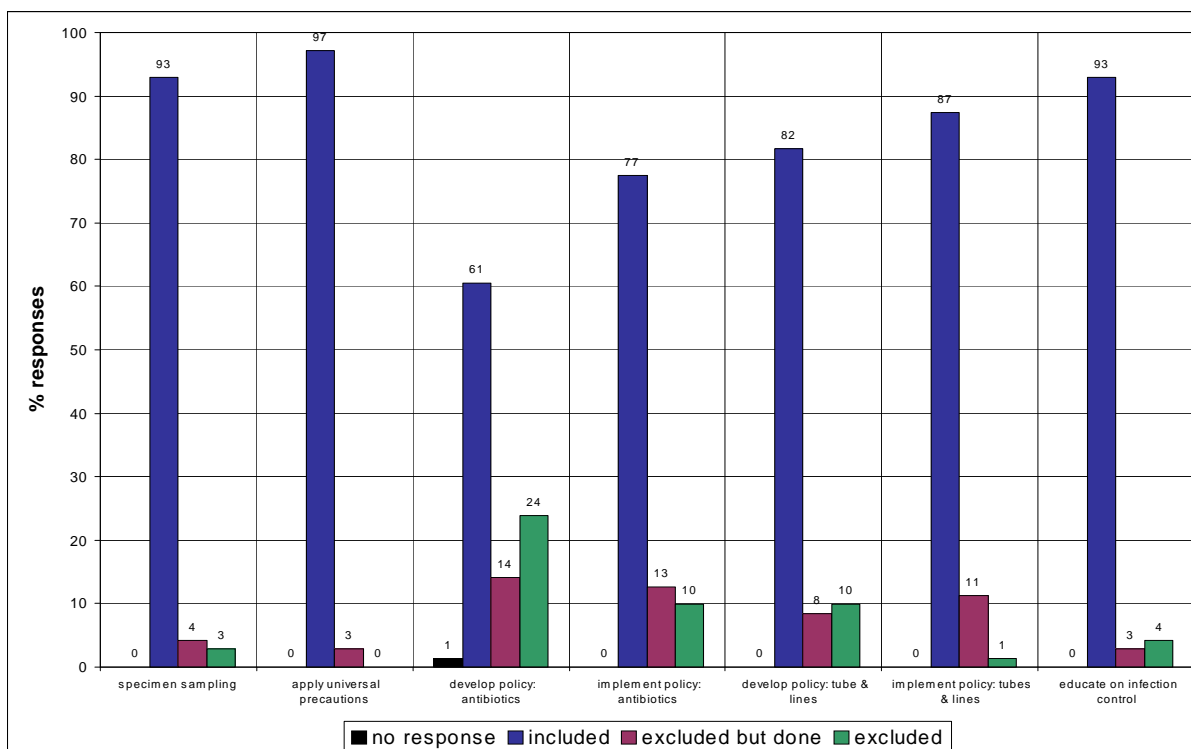


Figure 4.25 reflects activities associated with infection control in the critical care unit. The critical care registered nurses in the sample indicated for most activities that these would be considered to be covered by their scope of practice.

However, approximately one quarter of the sample (24%) (17 respondents) (N=71) indicated that development of policy related to the use of antibiotics was not a nursing function. Of these respondents, 11 (N=71) indicated that this was the doctor's function, one respondent (N=71) stating this is the function of the training consultant and four respondents (N=71) referring this function to the infection control registered nurse. This opinion is alarming as it is primarily the critical care nurse who will implement any policy related to antibiotic use and if she or he removes herself or himself from the policy-making process, a valuable resource and information will be lost. The end policy may well be

incongruent with nursing care of the patient. Ownership of the policy will not lie in the hands of the nursing staff and may be viewed as 'more work', rather than part of the holistic care of the critically ill patient.

The researcher finds it troubling that critical care nurses are reluctant to contribute their patient care expertise and clinical knowledge, and will happily implement policy to which they probably had made not contribution. This is evident from the 55 respondents (77%) (N=71) who were satisfied that implementing policy related to antibiotic use is covered by the scope of practice. The above-mentioned opinions may also be related to the critical care nurse drawing the boundary of her or his practice at 'doing' rather than 'thinking and doing', perhaps feeling that their responsibility only extends to implementing what another practitioner (usually a medical doctor) wants done. Again, one should note that this opinion is related to medication.

The sample strongly indicated the educational function of the registered nurse, with 66 respondents (93%) (N=71) stating that educating colleagues, patients and family is part of their daily scope of practice.

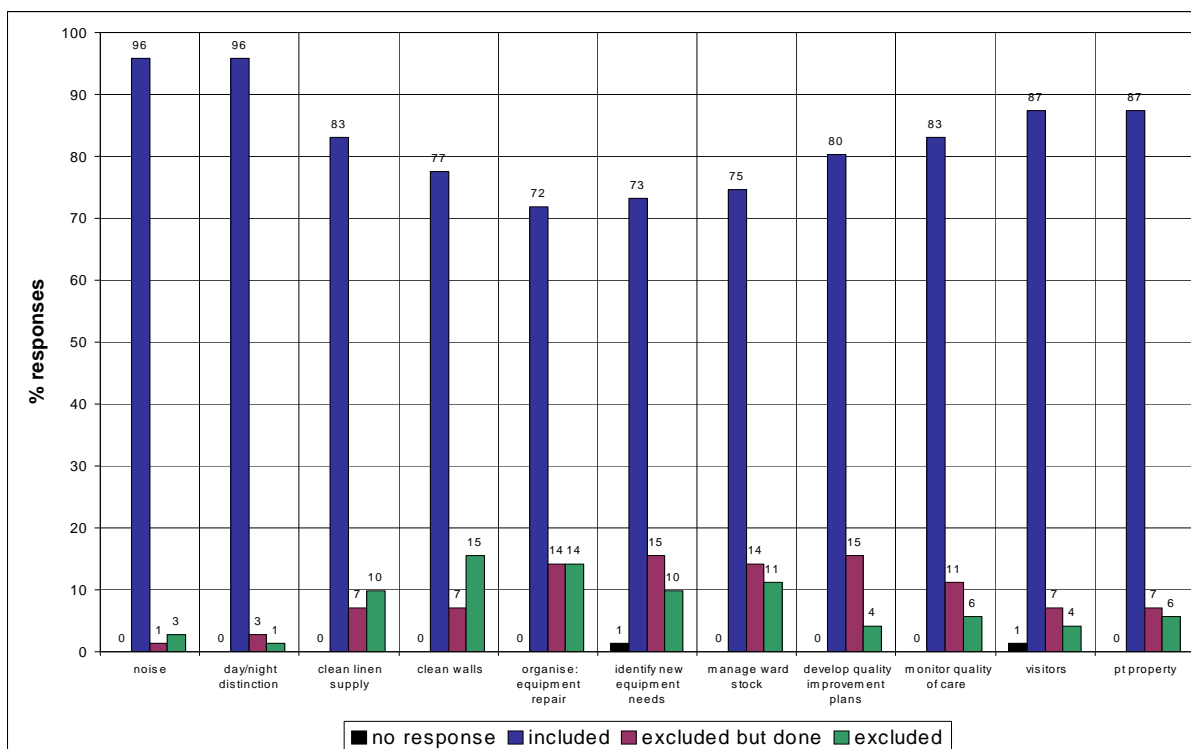
4.3.2.4.3 Critical care unit environment

As mentioned at the beginning of this section, establishing a therapeutic environment includes provision of a clean and comfortable environment for the patient where nursing personnel carry out nursing care of a high standard (Naudé *et al.*, 2000. In the private hospital sector, this includes the development of measurable quality indicators to be able to quantify patient care and satisfaction with nursing care in the hospital.

The activities from the questionnaire for discussion under this heading include activity 40 (40.1-40.11).

FIGURE 4.26

Critical care unit environment (N=71)



A therapeutic environment is considered to be integral to the delivery of quality care to a critically ill patient. This graph depicts the opinions of the critical care nurse related to aspects of creating and maintaining a therapeutic critical care unit environment to the benefit of the patient. Specifically the following activities were offered for opinion:

- Control of noise
- Distinction between day and night
- Organise a clean supply of linen
- Ensure clean walls, floors, windows

- Organise repair and maintenance of equipment
- Determine type and quantity of new equipment
- Management of ward stock and consumables
- Develop quality improvement plans
- Implement and monitor policies to ensure quality care
- Encourage and manage visitors
- Safekeeping of patient's property

Sixty-eight respondents (96%) (N=71) agreed that control of noise and distinguishing between day and nights are included in the scope of practice. This is an important aspect of nursing care in a critical care unit as sensory imbalance can provoke the stress response, further compromising the critically ill patient. Creating an environment where managing the significant noise generated and providing cues of daytime and nighttime to encourage sleep is essential nursing care. Woodrow (2000) emphasises that facilitating sleep is the nurse's most important role overnight.

In aspects related to the structural environment, higher percentages indicated that these were not nursing functions. While 59 respondents (83%) (N=71) agreed that organising a clean supply of linen is part of their scope of practice, seven respondents (10%) (N=71) indicated that this is not a nursing function, all stating this is the ambit of the housekeeping staff. Eleven respondents (15%) (N=71) did not think that ensuring clean walls, floors and windows is a nursing function, allocating this activity to the maintenance staff.

Arranging equipment maintenance is excluded from a nurse's activities by ten respondents (14%) (N=71), allocating this to the maintenance staff. A further ten respondents (14%) (N=71) indicated that they do fulfil this function but that the scope of practice does not cover this activity. Identifying new equipment needs is excluded by seven respondents

(10%) (N=71) who allocate this to the unit manager, with 11 respondents (15%) (N=71) excluding it from being covered by the scope of practice.

Fifty-three respondents (75%) (N=71) included managing ward stock and consumables in the scope of practice. Ten respondents (14%) (N=71) were of the opinion that this activity is done but would not be covered by the scope of practice, and eight respondents (11%) (N=71) did not see managing ward stock and consumables as a nursing function. These respondents indicated that it is the activity of the secretary or administrative clerk in the unit. The assistance of an administrative clerk to take charge of aspects such as counting stock used, ordering replacement stock for the unit and ensuring the correct items are delivered is invaluable. However, the critical care nurse has a responsibility to ensure that the items of ward stock and consumables charged to her or his patient are the items that were used for that particular patient. The critical care nurse must use her or his knowledge in identifying whether a particular item was appropriate to use related to the patient's diagnosis and nursing care needs. This is to prevent over- and under-charging of a patient and is surely part of the nurse's role as patient advocate. Cost-effective patient care is demanded in the face of escalating healthcare costs and the managed healthcare environment, and it forms part of the critical care nurse's responsibilities. Nel (1993) supports the activities of the critical care nurse that assure a cost-effective approach to patient care.

Activities related to the development and monitoring of quality improvement plans and care received support from the majority of the respondents as forming part of their scope of practice. Fifty-seven respondents (80%) (N=71) included the development of quality improvement plans as part of the scope of practice and 59 (83%) (N=71) offered the opinion that implementing and monitoring these plans are part of their scope of practice. Between 11 and 15% (8-11 respondents) (N=71) of the sample were of the opinion that these two activities were not covered by the scope of practice despite them being involved in these activities. Nel (1993) identified that the critical care nurse must practice and facilitate quality nursing care. In order to establish whether this is being achieved, quality improvement (or assurance) methods must be in place in the unit. Naudé *et al.* (2000) state

that quality assurance is a process of establishing desirable standards of nursing care, planning and providing the type of care that will meet those standards.

Sixty-two respondents (87%) (N=71) included managing patient's visitors and patient's property as part of their scope of practice.

Searle and Pera (1995) indicate that the scope of practice includes all activities related to the management of the patient's environment and therefore the critical care nurse (whether unit manager, shift leader or team member) has a responsibility to manage all the above-mentioned aspects of the critical care environment. The opinions offered in this section may be influenced by the respondents indicating that actually performing a task (e.g. washing the walls or fixing a ventilator) is not a nursing activity, rather than the critical care nurse identifying the need for a particular task and delegating that task to the appropriate person or department.

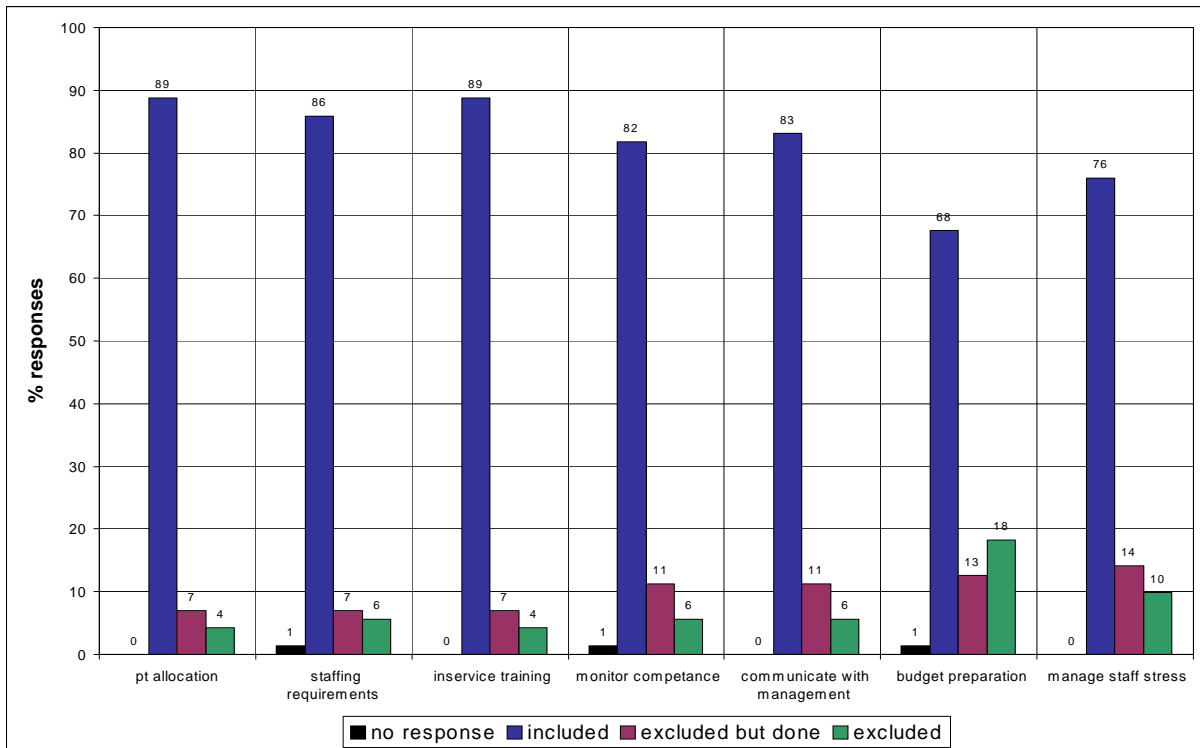
4.3.2.4.4 Staff management

Nel (1993) points out that the critical care nurse does have an administrative function, which is to manage the nursing activities of the critical care unit. She continues by arguing that, when the critical care nurse completes these functions and activities successfully, the critically ill patient will receive quality and cost-effective nursing care.

The activities from the questionnaire for discussion under this heading include activity 43 (43.1-43.7).

FIGURE 4.27

Staff management (N=71)



The data shown on this graph depict the opinion of the registered critical care nurses with respect to specific aspects of managing staff in a critical care unit. The following activities were listed for the respondents to provide an opinion about:

- Patient allocation to staff
- Determining the type of staff required for the patient needs
- In-service training
- Monitoring staff competence
- Communicating staff needs to higher management

- Assisting with budget preparation
- Monitoring and managing stress experienced by staff

Sixty-three respondents (89%) (N=71) agreed that allocating staff to specific patients and determining what type of staff are required for the admitted patients (61 respondents) (N=71) is covered by the scope of practice. The activities related to co-ordination of nursing teams to function as a unit is noted by Nel (2003) to be part of the administrative function of a critical care nurse. A co-ordinated team of critical care nurses ensures that the patient remains the focus of activities and does not become lost in the private healthcare system. It is only an experienced critical care nurse who understands the nursing implications of each patient's needs and is able to identify the nursing skills and knowledge required to meet these needs.

Conducting in-service training is covered by the scope of practice in the opinion of 63 respondents (89%) (N=71). Nel (1993) extends the education function of the critical care nurse to teaching her or his colleagues stating that the exchange of information allows knowledge to remain dynamic and in this way quality nursing care can be assured.. In-service training does not have to be a formal training session; valuable knowledge and skills may be more successfully learnt informally at the patient's bedside.

Fifty-eight respondents (82%) (N=71) were of the opinion that it is part of the critical care registered nurse's scope of practice to monitor the competence of staff. This activity ties in with the previous activity related to in-service training. For competence to be attained in a skill, one must be taught the skill (knowledge + behaviours). Surely monitoring competence of staff would then be an extension of in-service training activities. Nel (1993) considers an administrative function of the critical care nurse to be the facilitation of quality nursing care – monitoring staff competence would be an activity to fulfil this function.

Fifty-nine respondents (83%) (N=71) indicated that communicating staff needs to higher management is covered by the scope of practice for a critical care nurse. In order to

facilitate quality nursing care and manage nursing activities in the critical care unit, the critical care nurse has an important role to play in ensuring open communication channels.

Only 48 respondents (68%) (N=71) indicated that assisting with budget preparation is covered in the scope of practice, with 13 respondents (18%) (N=71) indicating that this is not a nursing function. This is a concern because, if the critical care nurse is not involved in budget planning, the specific needs of providing quality patient care to the critically ill patient will be compromised. The person most appropriate to determine critical care unit requirements related to staff, equipment and other budget information is the critical care nurse, whether she or he is a unit manager, shift leader or team member. The contribution of the nurse to the budgeting process is also part of providing quality nursing care.

Stress identification and management amongst staff members were seen by 54 respondents (N=71) to be part of the scope of practice. Naudé *et al.* (2000) state that as stress cannot be eliminated it must be managed effectively. Support of and from colleagues assist in managing stress. Effects of poorly managed stress on a critical care nurse will affect her or his ability to manage a critically ill patient, thereby influencing the quality of care provided to the patient.

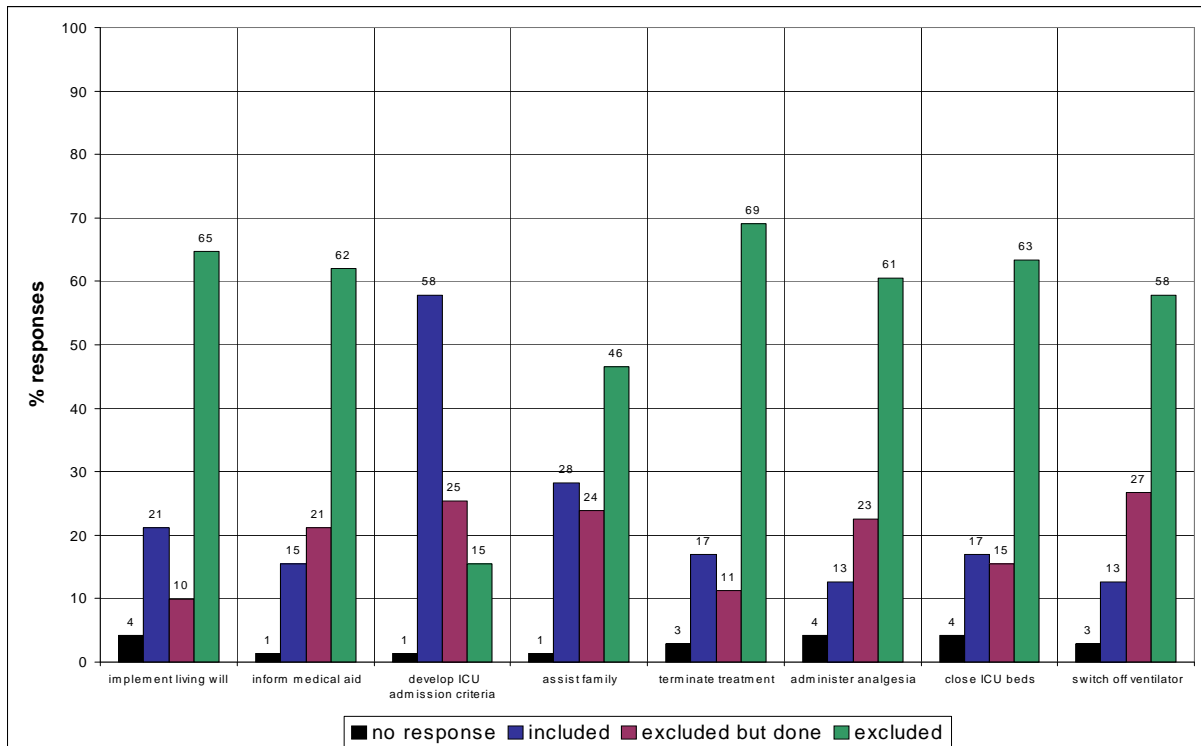
4.3.2.4.5 Professional dilemmas

Searle (2004) discuss core concepts around ethics in nursing that have wide acceptance globally. One of these is “the fundamental responsibility of the nurse/midwife ... to conserve life, promote health and alleviate suffering” (Searle 2004:98). While this statement does indeed describe a nurse’s approach to her or his patients, in practice it is scattered with ethical and professional stumbling blocks.

The activities from the questionnaire for discussion under this heading include activity 44, 45, 46, 47, 48, 49, 50.

FIGURE 4.26

Professional dilemmas (N=71)



The data shown on this graph depicts the opinion of the sample with respect to some professional dilemmas that are encountered in the critical care environment in the private hospital sector. The dilemmas to be considered by the respondents were

- Implementation of a living will
- Providing information to a medical aid company regarding a patient's status
- Participation in developing admission guidelines to ICU for critically ill patients
- Assisting the family in determining when treatment must be terminated

- Terminate treatment at the request of the family
- Administration of analgesia for purposes other than pain relief
- Close ICU beds when there is a shortage of qualified nursing staff
- Switch off a ventilator after a patient is declared brain dead

The overwhelming impression obtained from this graph is that the respondents viewed the dilemmas represented in the questionnaire as falling outside their nursing functions. The average score across the presented dilemmas for the category of 'excluded from nursing activities' was 55% (39 respondents) (N=71), with an additional 20% (14 respondents) (N=71) of the respondents stating that participating in resolving these dilemmas is done by them, but excluded from the scope of practice. Seventy-five per cent (53 respondents) (N=71) of this sample indicated that discussing and resolving professional dilemmas is not part of their functioning as a critical care nurse.

Forty-six respondents (65%) (N=71) indicated that implementation of a living will is not a nursing function, with only 15 respondents (21%) (N=71) considering this activity to be covered by the scope of practice. The majority of the respondents indicated that this is the doctor's function. Forty-four respondents (62%) (N=71) did not include providing information regarding a patient's status to a medical aid company to be a nursing function, requiring the administration department to do this. Fifteen respondents (N=71) indicated that although the scope of practice does not cover this, they do perform this activity.

Forty-seven respondents (66%) (N=71) indicated that it is part of their scope of practice to participate in developing admission criteria for critically ill patients.

Thirty-three respondents (46%) (N=71) stated that assisting a family in deciding when to discontinue treatment is not a nursing function. Twenty respondents (28%) (N=71) indicated that this is covered by the scope of practice and 17 (24%) (N=71) that they do perform this function but are not covered by the scope of practice. Forty-nine respondents

(69%) (N=71) indicated that it is not a nursing function to terminate treatment at the request of the family. These activities were aligned with the doctor treating the patient.

Forty-three respondents (61%) (N=71) indicated that it is not a nursing function to administer analgesia for purposes other than pain relief, with 28 respondents (39%) (N=71) indicating that the doctor should fulfil this activity. It is cause for concern to note that 16 respondents (23%) (N=71) indicated that although this activity is not covered by the scope of practice, it is performed by critical care nurses.

Forty-five respondents (63%) (N=71) stated that it is not a nursing function to close ICU beds when there is a shortage of qualified nursing staff. Half of these respondents stated that this is an activity for hospital management.

Forty-one respondents (58%) (N=71) indicated that it is not a nursing function to switch off a ventilator when a patient is declared brain dead. This is regarded as a doctor's activity by more than half of these respondents (27).

Scribante *et al.* (1995) consider the critical care nurse as the member of the health team who is in the best position to be the patient's advocate, ensuring that the patient's human rights are respected and being a spokesperson to make sure her or his health needs are met. This extends to resolving professional dilemmas. The dilemmas provided for consideration in the questionnaire are encountered in critical care practice in the private health sector regularly. It seems from the opinions provided that the critical care nurse would prefer to remove her/himself from being part of a decision-making team and allow other colleagues to make decisions that have an impact on her or his patient and her or his practice. The nurse is required to act as her or his patient's advocate, if she or he is not part of the decision-making team related to the professional dilemmas in caring for a critically ill patient, then this important role is neglected. The critical care nurse would then be functioning outside her or his scope of practice. Information is an important asset in resolution of professional dilemmas. A reason for the respondents' apparent willingness to take a backseat in these activities could be that they did not feel they had a reasonable understanding of the dilemma.. A more disconcerting reason could be that the respondents

do not want to take on the responsibility attached to these activities, leaving the 'difficult' activities and consequences to colleagues. A further reason that needs exploring is whether private sector hospitals empower their nursing staff to be part of this decision-making team or not.

4.3.3 Respondent's definition of the scope of practice (No.R.2598 of 30 November 1984) in clinical practice

This section describes the data collected under section 3 (page 8) of the questionnaire related to how the respondents explained the meaning of the Scope of Practice (R2598 of 30 November 1984) in their practice as critical care nurses. This data assists the researcher in understanding how the respondents define the phenomenon (i.e. scope of practice) influencing her or his classification of critical care nurse activities. It also provides the researcher with a view on what a critical care practitioner expects from the scope of practice regulations.

As described in Chapter 3, recurring main themes were identified from the comments of the respondents. These themes are displayed in the table below with a discussion of each theme thereafter.

TABLE 4.5**Themes**

1. Authorisation for practice
2. Basic guidelines for practice
3. Competence
4. Patient focus
5. Relevance to daily practice
6. Functioning outside the scope

4.3.3.1 Theme 1: Authorisation for practice

The respondents expressed the opinion that the scope of practice provides them with the legal and professional authority to practice nursing. They were definite in differentiating between legal authorisation and professional authorisation. Comments related to the legal authorisation referred to laws in general and the nursing act, whereas comments related to professional authorisation spoke of the South African Nursing Council and the regulations relating to practice.

“An authorisation enabling me to perform nursing acts within legal and ethical parameters.”

“... *alles wat die wet op verpleging my toelaat om te doen.*”

“The scope means what, when and how our practice is allowed.”

“What the SANC will protect me within.”

“Dis take wat jy uitvoer in verpleging waar jy slegs deur die wet beskrm word.”

The respondents also considered their own responsibilities and accountability related to this authorisation for practice.

“It’s what the law and SANC state I can do, but I stay responsible for my actions.”

4.3.3.2 Theme 2: Basic guidelines for practice

The respondents regularly referred to this theme. They pointed out that the scope of practice provides the critical care nurse practitioner with basic guidelines for clinical nursing practice.

The respondents regarded the Scope of Practice (R2598 of 30 November 1984) as a framework that guides their practice.

“It is the framework the registered nurse functions within.”

“The scope of practice acts as a guideline.”

“Dit bied aan my riglyne waarvolgens ek verpleging optimaal kan uitleef.”

“Solank sy wetenskaplik te werk gaan en in die belang van haar pasiënt optree, veilige praktyk beoefen soos in die bestek aagedui – is die bestek ‘n riglyn van optrede.”

The respondents seem to see the scope of practice as a background into which they add or adapt nursing care of the critically ill patient.

The scope of practice is also viewed by the respondents as a guideline for ensuring that the nurse practices safe nursing care.

“Dit verseker pasiënt veiligheid.”

“As ek binne my bestek van praktyk optree beteken dit dat ek veilig praktiseer.”

“It sets the framework to provide safe and effective care.”

“Bestek van praktyk is die grense waarbinne jy as verpleegkundige moet beweeg. Dit is vir jou eie beskerming en die veiligheid van die pasiënt.”

The respondents identified quite strongly that functioning within the scope of practice would mean that she or he is providing safe nursing care, and that she or he would be protected.

The respondents used the terms *tasks* and *actions* regularly when referring to the scope of practice being a basic guideline for nursing

“May perform certain tasks within your ability and training.”

“Perform nursing actions that are in your training radius.”

“Take wat deur my uitgevoer word moet binne my bestek wees.”

“Dit is verpleegfunksies of take wat deur my verrig word.”

The respondents pointed out that the scope of practice delineates a series of tasks or actions that they may perform.

4.3.3.3 Theme 3: Competence

The scope of practice is seen to describe the competence of the critical care nurse. The respondents referred to the application of the scope of practice in their daily nursing as competence to carry out nursing care. The competence is described in relation to training and tasks/actions/procedures. Again, the need to be responsible and accountable for their actions came through strongly.

“Bestek van praktyk beteken vir my dat jy alle take kan uitvoer waarvoor jy bevoegd voel asook bevoegd gevind is en die volle verantwoordelikheid vir jou optrede sal aanvaar.”

“Bestek van praktyk betekne die praktyk van ‘n opgeleide kritiekesorgverpleegkundige waarvoor spesiale opleiding deurgegaan moes word. Spesiale kennis en bevoegdhede word aan die persoon gekoppel.”

“Wat ek as verpleegkundige mag doen waarmee ek bevoegd voel.”

4.3.3.4 Theme 4: Patient focus

“Die bestek van praktyk beteken voorsiening aan die pasiënt se basiese behoeftes, ... effektiewe bestuur van die pasiënt.”

“This means the provision of a therapeutic environment, observation and interpretation of vital signs and other parameters, obtaining a nursing diagnosis and appropriate care plan.”

“Om op te tree in die pasiënt se belang en veiligheid, jou kennis en ondervinding volgens die pasiënt se behoeftes gebruik om optimale en ‘n goeie standaard van verpleegsorg te behaal.”

The respondents showed that the scope of practice means maintaining the patient as the focus of their critical care nursing activities.

4.3.3.5 Theme 5: Relevance to daily practice

Respondents indicated that they were not convinced of the relevance of the scope of practice as it stands to their practice.

The respondents appear to have strong opinions within this theme. The comments related to this theme were often punctuated with exclamation marks or were written in capital letters that showed the researcher that this is a theme that the critical care nurse attaches distinct emotion to. This is also brought out in the wording of the comments.

“The scope of practice does not accommodate most of the tasks that an ICU nurse needs to perform in order to be efficient. I feel the scope of practice undermines my potential abilities and restricts my practice at basic levels.”

“The scope of practice in R2598 is a little outdated and extremely non-specific!”

“Dit is NIE van toepassing op ons praktyk nie. As ‘n kritiekesorg verpleegkundige slegs binne haar bestek bly gaan sy self afstomp want die meeste van die take val buite ons

bestek. Dit is verrykend om die ander take en aksies te verrig want dit boost jou selfvertroue en plaas ook die pasiënte in goeie hande.”

Many of the respondents commented on the critical care nurse functioning in a ‘grey area’. Some respondents felt this undermined the application of the scope of practice, and others reinforced the concern that critical care nurses focus less on nursing care.

“Generally the registered nurse hovers in a grey area in ICU setting becoming more technicians than registered nurses. Critical care nurses find it hard to define their role as a nurse and look towards pinching from the medical model rather than concentrating on our own.”

“Difficult to define as there is a lot of role overload doing more of the doctor’s work and less ‘nursing at the bedside’.”

“Very broad with grey areas, if you do it you may be wrong, if you don’t do it you may be wrong – it’s a catch 22.”

There were opinions expressed about the varied ways in which the scope of practice may be interpreted.

“Dit kan in verskillende maniere geïnterpreteer word.”

The following comment from one of the respondents seems to summarise the general view related to the relevance of the scope of practice to daily critical care nursing

“I suppose it really means what I’m legally allowed to do, which I must admit I have never read. In practice it means doing whatever I’ve been trained to do. Council says you can do whatever you feel competent to do in an emergency – that covers a multitude of sins.”

4.3.3.6 Theme 6: Functioning outside the scope of practice

Many of the respondents included comments related to nursing in the critical care environment that falls outside of the scope of practice.

There is consensus among the comments from the respondents that functioning outside the scope of practice is required for the critical care nurse to fulfil her or his role.

“The scope of practice does not accommodate most of the tasks that an ICU nurse needs to perform in order to be proficient.” (Note the reference to tasks again.)

Many of the comments that related to this theme emphasised the need for patient-focussed care and taking accountability for one’s actions when functioning outside the scope of practice.

“Indien daar buite die bestek van praktyk gehandel word moet ‘n persoon bevoeg voel en daarna verantwoordelikheid daavoor aanvaar.”

“In ICU we are often forced to act out of our scope of practice in various situations, as long as you’re competent, aren’t endangering the patient and accept full responsibility and accountability for your actions.”

The respondents were very definite that in an emergency situation they would have to function outside the scope of practice.

“In an emergency situation, the scope doesn’t count.”

“You can do whatever you need to do to save a life.”

A further strong thread running through comments related to this theme was the relationship with medical colleagues. The respondents were of the view that the relationship built between a doctor and a nurse will determine how flexible the interpretation of the scope of practice will be.

“Depends on medical backup, if poor puts major stress on shift leader to perform outside scope of practice.”

“A lot depends on the experience as well as the trust or confidence the doctor has in a particular registered nurse.”

“Het ook beslis baie te make met ‘n vertrouens verhouding tussen die verpleegkundige en die dokter. Die kritiekesorg verpleegkundige is die persoon wat 24 uur per dag by haar pasiënt is, as sy slegs alles op bevel of voorskrif moet doen, waarvoor het sy die tyd en energie op die kursus gemors, dan kan enige iemand van die straat af ook mos hier kom staan.”

In summary, the respondents saw the scope of practice as the authorisation for their practice and providing a set of basic guidelines for clinical practice. They were of the opinion that the scope of practice requires that they focus on the patient and that it describes their competency. However, they feel that they often are required to function outside the scope of practice and question the relevance of the scope to their present situation.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In Chapter 5, the conclusions drawn from the results obtained in this study are presented and discussed. The recommendations developed from these conclusions will be presented.

The purpose of this study was to investigate the opinion of registered critical care nurses in the private healthcare sector as related to interpretation of the scope of practice in this environment. The researcher first identified the professional and legal guidelines existing for nursing practice in the critical care environment in South Africa and analysed the critical care registered nurse's opinions related to the activities they perform in their daily nursing care of critically ill patients with reference to the Scope of Practice (No. R2598 of 30 November 1984 as amended). These data allow the researcher to determine if these available professional and legal guidelines provide an appropriate foundation to guide the practice of the registered critical care nurse in the private hospital sector critical care environment, and to understand how the critical care nurse views her or his practice.

In order to achieve this purpose, the identified objectives of this study were to

- Determine the professional and legal guidelines governing critical care nursing practice;
- Investigate the opinion of the registered critical care nurse in the private hospital sector with respect to identified professional regulations and critical care nursing activities;

- Identify and discuss endpoints of the scope of practice as identified by the critical care nurse in the private hospital sector critical care environment; and
- Make recommendations based on the findings of the research.

Each of these objectives will be discussed in the light of the research findings as presented in Chapter 4.

5.2 Conclusions

5.2.1 Objective 1: Determine the professional and legal guidelines governing critical care nursing practice

The practice of the critical care nurse is governed and guided by laws related to her or his function as a citizen of South Africa as well as those related to her or his function as a professional nurse.

From these laws there are legal principles which inform the critical care nurse's practice. These legal principles focus on protection of both the patient and nurse by providing a guide for inter-person behaviour based on the reasonable person as standard. These principles are dynamic and flexible to meet the needs of the ever-changing society within which the nurse functions. Respect for human rights as well as the accompanying human responsibilities is included. The attitude of the critical care nurse in the private healthcare sector must be guided by these legal principles in order to give a solid foundation to her or his nursing care. Her or his nursing skill and behaviour will then be informed by these attitudes.

The concept of legal liability as related to critical care nursing practice is vital to understand, even more so in the private sector where consumers of healthcare services are more informed about the standard of care required. Legal liability holds the nurse responsible for her or his conduct and competence. An important concern for the critical care nurse is related to claims of negligence. In order to practice 'negligence safe' nursing

care, the critical care nurse must practice her or his craft at an acceptable standard that will meet the demand of the 'reasonable critical care nurse' test. This includes providing proof of competence for skills that might not be considered as nursing skills and excellent documentation regarding patient care, particularly in areas of possible nurse-patient-doctor dispute.

The critical care nurse and her or his employer have obligations toward each other. These obligations describe the relationship between employer and employee in order to enable the critical care nurse to provide a high standard of nursing care and the employer to offer the patient safe, competent, quality nursing care.

Professional guidelines for the critical care nurse exist in the form of the Scope of Practice (No.R.2598 of 30 November 1984 as amended); rules setting out the acts and omissions in respect of which the Council may take disciplinary steps (No.R.387 of 1985 as amended); and regulations relating to the course in Clinical Nursing Science leading to registration of an additional qualification (No.R.212 as amended by No.R.74 of January 1997). These regulations have their legal foundation in the Nursing Act No. 50, 1978 (as amended).

Regulation 212 describes the focus of the education (knowledge, skills, attitudes and behaviours) a critical care nurse should participate in to enable her/him to function safely and competently in the critical care environment. Regulation 2598 should assist the critical care nurse in describing her or his skills - scope – in any critical care environment within which she or he functions. The critical care nurse should be able to describe her or his parameters of practice while allowing for competence and skill development. Regulation 387 assists in refining and confining the behaviours of the critical care nurse within Regulation 2598.

Specialisation in nursing is recognised as necessary both internationally and in South Africa. However, at present the plethora of terminology and the confusion surrounding it hamper efforts at consolidating opinions and moving towards a role definition for the critical care nurse. Authors generally confirm that it must be the critical care nurse who determines her or his role in provision of acute healthcare services and that the development of this role must come from a focus on patient need.

The legal and professional guidelines for the practice of the critical care nurse in the private sector feed into the researcher's conceptual framework. The legal principles inform the attitude and behaviour of the registered critical care nurse, with the professional guidelines contributing to these as well as assisting in describing the knowledge and skills required to provide quality nursing care to the critically ill.

5.2.2 Objective 2: Investigate the opinion of the registered critical care nurse in the private hospital sector with respect to identified professional regulations and critical care nursing activities;

Objective 3: Identify and discuss endpoints of the scope of practice as identified by the critical care nurse in the private hospital sector critical care environment

These two objectives will be discussed together as together they form a coherent pair. The discussion will describe the general view of the respondents of the scope of practice followed by their opinion regarding the specific activities. These activities will be presented in the four categories under which the data was analysed, namely:

- The Scientific Process of Nursing
- Essential Care
- Homeostasis
- Therapeutic Environment

5.2.2.1 General view of the Scope of Practice (No.R2598 of 30/11/1984 as amended)

The respondents viewed the scope of practice as the professional authorisation for their practice and as providing a set of basic guidelines for clinical practice. They were of the opinion that the scope of practice requires that they focus on the patient and that it

describes their area of competency. This confirms the value of a scope of practice as the respondents confirm the actual purpose of the profession having a regulation describing the domain of nursing practice.

The respondents commented that they often have to work outside the scope of practice in order to fulfil the needs of the critically ill patient or meet their obligations to the employer and the attending doctor, and this makes the scope of practice irrelevant to critical care nursing. Analysis of the data along with published literature shows that the scope of practice in fact allows the critical care nurse a foundation from which she or he can develop the nursing care that a critically ill patient requires.

It is contended that, rather than the nurse working outside their scope of practice, it is the limited discussion and research into this subject that limits their practice. Sources referred to in Chapter 2 emphasise the importance of the nurse in any particular field being responsible, or rather, required to determine the knowledge and skill that is needed to meet the nursing needs of a patient. It is thus not the responsibility of the hospital management, medical colleagues or any other party to determine or direct the nursing knowledge and skills required for the care of a critically ill patient; it is the sole responsibility of the critical care nurses. Critical care nurses must initiate discussion amongst themselves regarding their practice and how it can be broadened or may be limited. These discussions can then be expanded to include hospital management and medical colleagues, but the impetus for determining the parameters of nursing practice must be driven from the nursing corp. An important consideration at the forefront of this discussion must be the delivery of quality NURSING care to a critically ill patient. The debate around what 'nursing care' in the critical care environment constitutes is a prerequisite for this discussion and can expand significantly on the basis of this study. Not just the implementation of an activity (skill) should be considered, but also what the encompassing knowledge, attitude and behaviour requirements for a nurse to accomplish this aspect of patient care should be to provide holistic, quality patient care. A critical care nurse must accept and acknowledge her or his own value in patient care delivery, or else they will always be regarded as a 'follower of orders' rather than as an 'innovator of care'.

One must also consider the use of the scope of practice as an excuse for excluding activities. Through analysis of the data, it has been noted that there are areas where the critical care nurse appears to accept an important but elementary activity (for example the implementation of policy regarding antibiotic use and administration), but then exclude an activity that requires more input from the nurse related to knowledge and skills (for example, develop policy regarding antibiotic use and administration). This seems to indicate the nurse wanting to remove her/himself from decision making regarding her or his patient's care, and being satisfied to merely implement the orders of other practitioners. This pattern is repeated in other activities where the nurse would be required to offer an opinion, be part of complex decision-making processes and, in certain instances, act on her or his training and skills to assist the patient. This is unacceptable; it cannot be regarded as delivery of quality nursing care. The critical care nurse must caution against mechanistic task completion and protect her or his role in the management of a critically ill patient.

A further concern raised during the analysis of the questionnaire data is that there are basic nursing skills that were excluded by some respondents. The researcher anticipated these activities would be supported by 100% of the sample as activities that are part of the Scope of Practice. Examples of these include assessment of a patient, monitoring and interpreting various patient data and providing for the essential care needs of a patient. These are nursing care skills that are developed through undergraduate programmes in nursing and should be built on during postgraduate or post-basic specialist nursing programmes. These skills form the basis of all nursing management of a critically ill patient and holistic, quality nursing care cannot be provided without expertise in these skills.

The conceptual framework developed for this study emphasised that, in order for the critical care nurse to meet the needs of a patient, she or he must combine the correct knowledge and skills together with appropriate attitude, manner and behaviour. If these are not all applied, then the patient's needs will not be resolved; neither will the responsibilities to the employer or medical colleagues be satisfied. The critical care nurse will frustrate her or his own professional and clinical development.

5.2.2.2 The scientific process of nursing

The table below summarises the activities of the critical care nurse that are regarded by 80% (57 respondents) (N=71) and/or evidence from literature sources to be included in the scope of practice.

Table 5.1

The scientific process of nursing

Element from the Scope of Practice (R2598)	Related Critical Care Nursing Activities
<p>(a) The assessment and diagnosis of a health need and the prescription, provision and execution of a nursing regimen to meet the need of a patient or group of patients or, where necessary, by referral to a registered person</p> <p>(b) The execution of a programme of treatment or medication prescribed by a registered person for a patient</p> <p>(c) The treatment and care of a patient and the administration of medicine to a patient, including the monitoring of the patient's vital signs and of her or his reaction to disease conditions, trauma, stress, anxiety, medication and treatment</p>	<p>(1) Physical assessment of the critically ill patient.</p> <p>(2) Monitoring, recording and interpretation of vital signs, including:</p> <ul style="list-style-type: none"> -ECG rhythm -Oxygen saturation -Non-invasive blood pressure -Core temperature -Arterial pressure -Central venous pressure -Pulmonary artery pressure <p>(3) Identify patient problems and develop a nursing plan to resolve identified patient problems</p> <p>(4) Keep a scientific record of patient progress.</p>

In this category, there was one group of activities where the respondents were unsure of their standing with respect to the Scope of Practice (No R 2598 of 30 November 1984 as amended). The researcher identified this when at least 33% (24 respondents) (N=71) indicated that they perform these activities but that they are not part of the scope of practice and/or excluded these activities from their scope of practice. These are activities related to the following:

- Manipulate a pulmonary artery catheter

There are no specific professional guidelines excluding these activities from the scope of a critical care nurse's practice. This indicates that, should the patient's condition warrant such monitoring and the critical care nurse has the knowledge and competency to perform such monitoring, the regulations would cover these activities.

The critical care nurse and employer would need to analyse the patient profile to determine the need for such activities and then ensure mechanisms are in place to enable the critical care nurse to attain and maintain competency in these skills.

The lack of coherent opinion related to the manipulation of the pulmonary artery catheter warrants further investigation, especially considering that the respondents included the monitoring, recording and interpretation of this parameter in their scope of practice.

5.2.2.3 Essential care

The table below summarises the activities of the critical care nurse that are regarded by 80% (57 respondents) (N=71) and/or evidence from literature sources to be included in the scope of practice.

Table 5.2

Essential care

Element from the Scope of Practice (R2598)	Critical Care Activity
(b) The execution of a programme of treatment or medication prescribed by a registered person for a patient (e) The promotion or maintenance of hygiene, physical comfort and reassurance of the patient (f) The promotion of exercise, rest and sleep with a view to healing and rehabilitation of a patient (g) The facilitation of body mechanics and the prevention of bodily deformities in a patient in the execution of the	(1) Basic needs assessment and care, including: -Hygiene care -Pressure care -Nutritional needs -Elimination needs -Social needs -Rest and sleep -Mobility

<p>nursing regimen</p> <p>(t) The care of the dying and the care of the recently deceased patient within the execution of the nursing regimen</p>	<ul style="list-style-type: none"> -Safety -Communication -Patient advocacy <p>(2) Pain assessment and management, including:</p> <ul style="list-style-type: none"> -Patient positioning -Massage and relaxation techniques -Bolus intravenous analgesia as prescribed -Initiating prescribed intravenous infusion of analgesia <p>(3) Care of the dying patient and his family</p>
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In this category, there was one activity where the respondents were unsure of their position with respect to the Scope of Practice (No R 2598 of 30 November 1984 as amended), namely

- Initiating analgesia as per a standing order from a doctor

The South African Nursing Council does not provide an opinion on the use or implementation of standing or generic medical prescriptions. In the light of this, the critical care nursing staff must decide to either disallow the use of standing orders completely, or ensure that where standing orders are utilised that they conform to the requirements discussed in Chapter 4. Nel (1993) presents an argument that, as nurses may not prescribe medication or withdraw blood specimens unless under the direct supervision of a doctor, standing orders are a reasonable method of allowing the critical care nurse to continue managing a patient within set guidelines. It is the researcher's opinion that, should a registered critical care nurse implement a standing order that conforms to all the legal requirements for a prescription with evidence in the patient's care records that this was an appropriate action to have taken, the scope of practice would cover her or his activities.

5.2.2.4 Homeostasis

The table below summarises the activities of the critical care nurse that are regarded by 80% (57 respondents) (N=71) and/or evidence from literature sources to be included in the

scope of practice. Activities where the higher percentage of the respondents excluded the activity from the scope of practice are presented after the table.

Table 5.3

Homeostasis

Element from the Scope of Practice (R2598)	Critical Care Activity
<p>(b) The execution of a programme of treatment or medication prescribed by a registered person for a patient</p> <p>(c) The treatment and care of a patient and the administration of medicine to a patient, including the monitoring of the patient's vital signs and of her or his reaction to disease conditions, trauma, stress, anxiety, medication and treatment</p> <p>(h) The supervision and maintenance of a supply of oxygen to a patient</p> <p>(i) The supervision and maintenance of fluid, electrolyte and acid-base balance of a patient</p> <p>(j) The facilitation of the healing of wounds and fractures, the protection of the skin and the maintenance of sensory functions in a patient</p> <p>(k) The facilitation of the maintenance of bodily regulatory mechanisms and functions in a patient</p> <p>(l) The facilitation, maintenance and improvement of the nutrition of a patient</p> <p>(m) The facilitation and maintenance of elimination by a patient</p> <p>(q) Preparation for and provision of relevant nursing and facilitating of activities during operative, diagnostic, and therapeutic procedures for the patient</p>	<p>(1) Initiate oxygen therapy via:</p> <ul style="list-style-type: none"> -nasal cannula -face mask -CPAP therapy -resuscitation bag and oral airway <p>(2) Maintain / protect the airway by:</p> <ul style="list-style-type: none"> -intubating a patient -initiating ventilation of an intubated patient -monitoring a ventilated patient -weaning a patient off ventilation -extubating a patient from an endotracheal tube or tracheostomy tube -changing a tracheostomy tube -suctioning a ventilated patient -interpret a patient's response to prescribed ventilator settings -interpreting patient response to prescribed ventilator settings -interpreting arterial blood gasses -adjusting ventilation settings against an arterial blood gas result -changing ventilator circuits <p>(3) Insert peripheral invasive lines</p> <p>(4) Invasive monitoring systems:</p> <ul style="list-style-type: none"> -Set up invasive pressure monitoring lines -Remove invasive pressure monitoring lines <p>(5) Insert the following on clinical nursing assessment:</p>

	<ul style="list-style-type: none">-transurethral catheter-nasogastric tube(6) Manage drainage systems:<ul style="list-style-type: none">-underwater chest drains-ventricular drains-wound drains-nasogastric drainage-urinary drainage(7) Remove underwater chest drains(8) Request and interpret the following diagnostic tests on clinical nursing assessment:<ul style="list-style-type: none">-haemoglobin-arterial blood gas-electrolytes(9) Interpret chest x-rays(10) Collect blood specimens via:<ul style="list-style-type: none">-arterial or venepuncture- <i>in situ</i> arterial or central venous lines(11) Initiate therapy on clinical nursing assessment:<ul style="list-style-type: none">-cardiopulmonary resuscitation-defibrillation-cardiovert ventricular tachycardia-administer crystalloid and colloid fluids-administer emergency drugs intravenously (Adrenaline, Atropine)-administer a nebuliser (medication not specified)(12) Adjust drug infusion rates based on clinical nursing assessment(13) Manage an epidural infusion based on clinical nursing assessment(14) Report any changes made to prescribed treatment to attending doctor(15) Manage fluid balance by:<ul style="list-style-type: none">-assessment of patient's fluid balance status-adjust oral or intravenous intake based on clinical nursing assessment
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	<ul style="list-style-type: none"> -care of a patient receiving dialysis -manage a dialysis machine <p>(16) Manage nutrition by:</p> <ul style="list-style-type: none"> -assessment of patient's nutritional status -obtain enteral access, initiate and monitor enteral feeds -initiate and monitor total parenteral feeds <p>(18) Provide assistance with diagnostic and therapeutic interventions where more appropriate personnel are not available.</p>
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There were activities identified where the opinion of the registered critical care nurses was not congruent with the literature available to assist in determining whether an activity should be included in the scope of practice or not. In these cases, the critical care nurses indicated that these are activities they do perform but that they feel are not covered by the scope of practice. These are activities where the respondents' opinion to include the activity as part of the scope of practice scored lower than 80% (56 respondents) (N=71), with at least 33% (24 respondents) (N=71) supporting the opinion that the activity is performed but not included in the scope of practice and/or that it is excluded as a nursing activity. Evidence from literature supports the inclusion of these activities in the scope of practice as long as a critical care nurse with the requisite knowledge, skill and competency performs them. A nurse who has completed a programme in critical care nursing must possess these clinical skills. Due to the ambivalence of the respondents, these activities should be analysed in the context of each critical care unit to specifically determine whether that activity is appropriate to the unit's consumer (patient, doctor) and nurse profile. There must also be continuous education plans in place to ensure that the critical care nurse has the opportunity to maintain competence in these skills as is her or his responsibility. These activities included

- intubation and initiation of ventilation
- weaning and extubating a patient off an endotracheal or tracheostomy tube
- adjusting ventilator settings against arterial blood gas results

- changing of tracheostomy tubes
- setting up invasive monitoring lines
- removal of intracranial or left atrial pressure monitoring lines
- requesting routine blood tests or emergency chest x-ray
- administration of colloid fluids, potassium chloride, dextrose 50%, furosemide and naloxone hydrochloride based on clinical nursing assessment
- titration of inotropic, sedation, analgesia or epidural infusions based on clinical nursing assessment
- managing a dialysis machine
- assisting a doctor with angiography, insertion of an intra-aortic balloon pump device or tracheostomy tube

The majority of the respondents excluded the following activities from those of the critical care nurse. These are activities where the respondents' opinion scored highest in the category of 'excluded from nursing activities'. In all cases, the respondents indicated that the attending doctor should carry out these activities.

- insertion of central venous lines via any venous access point, arterial pressure monitoring lines, underwater drainage tubes, or suprapubic catheter
- requesting routine chest x-rays based on clinical nursing assessment without a medical prescription
- initiate or administer therapy based on clinical nursing assessment without a medical prescription:
 - insulin intravenously
 - morphine intravenously
 - calcium chloride/gluconate intravenously
 - aminophyllin infusion
 - albumin infusion
 - fresh frozen plasma transfusion

- blood transfusion
 - inotropic therapy
 - thrombolytic therapy
 - cardiovert for atrial fibrillation
- administer an epidural top-up

Exclusive of the administration of an epidural top-up, none of these activities are supported in literature as being part of a critical care nurse's practice and skill domain. These activities may be regarded as the end-points of the critical care nurse's scope of practice in the private healthcare sector as determined by her or his peers. This means that requiring the critical care nurse to perform any of these activities would be unreasonable as it is unlikely that her or his actions would be covered by the scope of practice.

The reasons for the exclusion of the epidural top-up must be determined. The South African Nursing Council does support this activity as part of the scope of practice as long as the nurse has appropriate training and proves competency in this skill. Should the critical care unit's patient profile necessitate the implementation of this activity, time must be invested in upgrading the skills and knowledge of the nurses required to perform this activity.

5.2.2.5 Therapeutic environment

The table below summarises the activities of the critical care nurse that are regarded by 80% (57 respondents) (N=71) and/or evidence from literature sources to be included in the scope of practice. Activities where the majority of the respondents excluded the activity from the scope of practice are presented after the table.

Table 5.4

Therapeutic environment

Element from the Scope of Practice (R2598)	Critical Care Activity
<p>(d) The prevention of disease and promotion of health and family planning by teaching and counselling individuals, families, groups of persons and the community</p> <p>(n) The facilitation of communication by and with a patient, family, significant others, groups and communities</p> <p>(o) The facilitation of the attainment of optimum health for the individual, the family, groups and the community</p> <p>(p) The establishment and maintenance of an environment in which the physical and mental health of the patient is promoted.</p> <p>(r) The co-ordination, complementing and facilitating of the healthcare provided for the patient by other categories of health personnel</p> <p>(s) The provision of effective patient advocacy to enable the patient to obtain the healthcare he needs</p>	<p>(1) short term rehabilitation of critically ill patients, including:</p> <ul style="list-style-type: none"> -patient education -passive range of motion exercise -pre-operative visits -family education <p>(2) Implement infection control measures, including:</p> <ul style="list-style-type: none"> -Specimen sampling -Application of universal precautions -Development and implementation of policy related to antibiotics, tubes and lines -Educate colleagues, family and patient about infection control <p>(3) Create and maintain a therapeutic environment, considering:</p> <ul style="list-style-type: none"> -Noise control and time orientation -Environmental hygiene -Equipment management -Ward stock control -Quality improvement processes -Visitor management -Safe keeping of possessions -Safe movement between departments <p>(4) Personnel management, considering:</p> <ul style="list-style-type: none"> -Staffing needs and allocation -In-service training and competence monitoring -Budgeting -Communication link between hospital and unit staff <p>(5) Participate in discussion and resolution of professional dilemmas</p>

Activities that would benefit from further investigation on an individual unit level to determine their relevance to that specific environment include

- development of policy related to antibiotic use and administration

The opinion of the respondents related to professional dilemmas indicated by more than 55% (39 respondents) (N=71) that the activities listed were not part of nursing activities. Analysis of literature indicates a differing perspective to that of the respondents, where the participation of the nurse in dilemmas such as these is seen as a vital role for the nurse. In order for a critical care nurse to provide holistic, quality nursing care to a critically ill patient, she or he must not shy away from difficult, taxing and complex interactions or decisions. The managers of nursing services and critical care units must empower their critical care staff to be part of this process to facilitate growth in the individual nurses and improvement in the care they provide to the patients. The critical care nurse's role with respect to professional dilemmas must be discussed informally and encouraged in practice, in particular with respect to

- supporting and assisting family through complex decisions related to treatment termination and death
- managing patient load based on the capacity of the unit (staff, available beds, equipment, stock etcetera)
- distributing patient information to external sources

From the data analysed in Chapter 4 and the above discussion, it can be deduced that the present scope of practice does provide a foundation from which the critical care nurse may practice. Literature and discussions with other experts in the field of critical care nursing assisted to confirm that the activities critical care nurses regarded as being done but possibly not covered by the scope of practice would in fact be covered. This is confirmed

by generally requiring that the activity must be one that the nurse can prove knowledge and skill in based on patient need. These activities should be determined on an individual unit base and training opportunity made available to ensure continued competence in these activities. The activities identified by the respondents as excluded from their scope of practice are reasonable to exclude and no support for inclusion of these activities was found in literature relating to critical care nursing. These activities pertain mainly to the skills of invasive device insertion, which do not form part of the critical care nursing curriculum; and therapy related to drugs that are not considered to be emergency drugs.

The most important aspect around the scope of practice is to realise that, while it serves as a base for all the disciplines that grow out of the nursing needs of our population, it cannot be interpreted literally at the level of specialisation of critical care nursing. Rather, it must be seen as a starting point for the standard of care and clinical skills that are absolutely required in the critical care environment and a guide for that which becomes necessary as healthcare and nursing develops. The scope of practice must also develop as the profession evolves, with practitioners realising that an inflexible guide limits practice evolution.

5.3 Recommendations

The recommendations will be presented in three sections. The first will speak to the critical care nurses in order to assist in clarifying their understanding and application of the scope of practice in the real world of critical care nursing. The second is directed at the private hospital management to guide their support of the critical care nursing team in their hospitals. The recommendations intend to assist in their goal of being able to provide the patient with a team of nurses best able to provide quality nursing care. The third identifies further opportunities for research and academic contribution to improved understanding and application of the scope of critical care nursing practice.

5.3.1 Recommendation for critical care nursing practice

- Unit-based discussions where all critical care nurses are given the opportunity to express their views on the activities determined by the patient needs of that unit's patient profile. The nursing team must be able to identify whether the activity does contribute to the nursing management of a patient. They must determine what knowledge, clinical skill, attitudes and behaviour are required to completely fulfil the need, and whether they as a team possess these requirements. If the team is lacking in any area, they must determine the most appropriate method of developing an appropriate knowledge, skill and attitude base for the activity required.
- Evidence-informed practice must guide the above-mentioned discussions. Research must inform nursing practice as far as able to ensure the relevance and applicability of the interventions. Research also assists in determining whether the scope of practice would include a particular activity.
- Opportunities for commenting on nursing-related legislation or regulation must be utilised. Practice-based nurses must influence policy writers to ensure their professional development is not curtailed.
- Opportunities for professional development must be utilised to fulfil professional, personal and employer obligations or responsibilities.
- Participate fully in discussions at hospital level that will influence clinical nursing practice in the critical care unit.
- Collaborate with external resources (for example university nursing departments) for assistance in research, providing opinions and staff development.

5.3.2 Recommendations for private hospital management

- Empower nursing staff to participate in clinical practice policy development by requiring their contributions and encouraging discussion on complex concerns or areas of conflict with medical colleagues.
- Identify recurring professional dilemmas in the critical care unit and enable discussion by the nursing team through facilitated meetings to identify the role and expectations from the critical care nurse as well as hospital management.
- Provide access to critical care nursing research to facilitate best practice at the ground level.

5.3.3 Recommendations for further research

- Research into the crux of what critical care nursing is and how to develop this nursing ability to best serve the needs of the South African population.

5.4 Summary

In summary, this study has confirmed the applicability of the Scope of Practice (No.R. 2598 of 30/11/1984 as amended) to the clinical practice of the critical care nurse. It is the professional responsibility of the critical care nurse to utilise this as a foundation for critical, analytical and reflective practice in her or his care of a critically ill patient.

ADDENDUM A

Thank you for agreeing to participate in this study.

This questionnaire forms part of a thesis to be submitted as a requirement in obtaining a MCur through the Department of Nursing at the University of Stellenbosch. The thesis is titled: An Investigation into the Scope of Practice of a Critical Care Nurse in a Private Hospital.

The aim of this study is to determine if the professional and legal guidelines for nursing practice provide an adequate foundation for the practice of critical care nursing.

The purpose of this questionnaire is to determine what critical care nurses consider to be part of their skill domain and whether, in the opinion of the critical care nurse, these skills are part of the Scope of Practice (No. R. 2598 of 30/11/1984 as amended).

Please complete the questionnaire expressing your own opinion and not that of the institution you work for. It is important that you take the opportunity to express your own expert view.

The questionnaire will take approximately 20 minutes to complete.

Please place the questionnaire in the envelope provided and seal it.

Your response will remain anonymous.

Thank you

Janet Bell

Questionnaire

Scope of Practice of a Registered Critical Care Nurse

Section 1 – Demographic Data

mark appropriate block (✓)

1.1 Qualifications :

1.1.1 Undergraduate study:

Diploma	Degree

1.1.2 Postgraduate / Post basic Critical Care qualification :

Diploma	Degree

1.2 Years experience in critical care nursing :

1.2.1 From basic nursing qualification to obtaining critical care qualification:

0 – 1 years	1 – 2 years	2 – 3 years	3 – 4 years	4 – 5 years	> 5 years

1.2.2 After obtaining critical care qualification to present:

0 – 1 years	2 – 3 years	4 – 5 years	> 6 years

1.3 Do you function as one of the following: (mark one block only)

Shift leader	Unit manager

1.4 Type of unit :

General	Surgical	Cardio - thoracic	Coronary care	Respiratory	Neurology

Other (specify) :

--

Section 2 - Activities of the Critical Care Nurse

The following activities are performed regularly in the care of critically ill patients. Rate each activity against the scale provided and mark (✓) the appropriate box.

1. Activity is covered by the Scope of Practice (No.R.2598 of 30/11/1984 as amended)
2. Activity is not covered by the Scope of Practice (No.R.2598 of 30/11/1984 as amended), but is performed by the critical care nurse
3. Activity is not a nursing function
4. If (3) is chosen, indicate who should fulfil this function.

Abbreviations used :

- ECG electrocardiogram
- CO₂ carbon dioxide
- CPAP continuous positive airway pressure
- CPR cardio-pulmonary resuscitation
- CCRN critical care registered nurse
- Hb haemoglobin

ACTIVITY	1	2	3	4
1. Physical assessment of the critically ill patient				
2. Basic needs assessment & care :				
2.1 Hygiene care				
2.2 Pressure care				
2.3 Nutritional needs				
2.4 Elimination needs				
2.5 Social needs				
2.6 Rest & sleep				
2.7 Mobility				
2.8 Safety				
2.9 Communication				
2.10 Patient advocacy				
3. Monitoring and recording of vital signs :				
3.1 ECG rhythm strip				
3.2 Oxygen saturation				
3.3 Non-invasive blood pressure				
3.4 Expired CO ₂				
3.5 Core temperature				
3.6 Arterial pressure				
3.7 Central venous pressure				
3.8 Intracranial pressure				
3.9 Pulmonary artery pressure				
4. Interpretation of vital signs				
5. Identify patient problems				
6. Develop nursing plan to resolve identified patient problems				
7. Initiate oxygen therapy via :				
7.1 Nasal cannulae				
7.2 Face mask				
7.3 CPAP therapy				
7.4 Resuscitation bag & oral airway				

1. Activity is covered by the Scope of Practice (No.R.2598 of 30/11/1984 as amended)
2. Activity is not covered by the Scope of Practice (No.R.2598 of 30/11/1984 as amended), but is performed by the critical care nurse
3. Activity is not a nursing function
4. If (3) is chosen, indicate who should fulfil this function.

Abbreviations used :

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Hb haemoglobin

ACTIVITY	1	2	3	4
8. Maintain / protect the airway :				
8.1 Intubate a patient				
8.2 Initiate ventilation of an intubated patient				
8.3 Monitor a ventilated patient				
8.4 Wean a patient off ventilation				
8.5 Extubate a patient from oral or nasal intubation				
8.6 Extubate a patient from tracheostomy tube				
8.7 Change a tracheostomy tube				
8.8 Suctioning a ventilated patient				
9. Interpret patient response to ventilation parameters				
10. Interpret arterial blood gases				
11. Adjust ventilation settings against arterial blood gas result				
12. Change ventilator circuits				
13. Switch off ventilator when a patient is declared brain dead				
14. Pain assessment				
15. Pain relief through :				
15.1 Patient positioning				
15.2 Massage and relaxation techniques				
15.3 Bolus intravenous analgesia as prescribed				
15.4 Initiating prescribed intravenous infusion of analgesia				
15.5 Initiating analgesia as per standing order from doctor				
16. Insert intravenous lines :				
16.1 Peripheral access				
16.2 Central access: peripherally inserted central line				
16.3 Central access : external jugular vein				
16.4 Central access: internal jugular or subclavian vein				
17. Initiate the following :				
17.1 CPR				
17.2 Defibrillation				
17.3 Cardioversion for atrial fibrillation				
17.4 Cardioversion for ventricular tachycardia				

1. Activity is covered by the Scope of Practice (No.R.2598 of 30/11/1984 as amended)
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3. Activity is not a nursing function
4. If (3) is chosen, indicate who should fulfil this function.

Abbreviations used :

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ACTIVITY	1	2	3	4
18. Initiate indicated therapy on nursing assessment (without medical prescription) :				
18.1 Crystalloid fluid replacement				
18.2 Colloid fluid replacement				
18.3 Fresh frozen plasma transfusion				
18.4 Blood transfusion				
18.5 Inotropic therapy				
18.6 Thrombolytic therapy e.g.: streptokinase				
18.7 Intravenous emergency drugs e.g. : adrenaline, atropine				
19. Request investigations on patient (without medical prescription) :				
19.1 Routine check of blood parameters: Hb, gas, electrolytes				
19.2 Blood tests due to patient deterioration : Hb, gas, electrolytes				
19.3 Routine chest xrays				
19.4 Chest x-rays due to patient deterioration				
20. Collect blood specimens via :				
20.1 In-situ arterial line				
20.2 Arterial puncture				
20.3 In-situ central venous line				
20.4 Venepuncture				
21. Evaluate laboratory data				
22. Administer on clinical nursing assessment (without medical prescription):				
22.1 Adrenalin intravenously				
22.2 Atropine intravenously				
22.3 Potassium Chloride infusion				
22.4 Insulin intravenously				
22.5 Dextrose 50% intravenously				
22.6 Morphine intravenously				
22.7 Furosemide (Lasix) intravenously				
22.8 Nalaxone Hydrochloride (Narcan) intravenously				
22.9 Calcium Chloride/Gluconate infusion				
22.10 Nebulisation of patient				
22.11 Aminophyllin infusion				
22.12 Albumin infusion				

1. Activity is covered by the Scope of Practice (No.R.2598 of 30/11/1984 as amended)
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3. Activity is not a nursing function
4. If (3) is chosen, indicate who should fulfil this function.

Abbreviations used :

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ACTIVITY	1	2	3	4
23. Adjust drug infusion rates against patient response without a prescription :				
23.1 Inotropic drug infusions eg: dobutamine (Dobutrex)				
23.2 Sedation infusions eg: midazolam (Dormicum)				
23.3 Analgesia infusions eg: morphine				
23.4 Epidural infusion				
24. Administer an epidural 'top-up' according to prescription				
25. Administer any drug according to a standing order				
26. Report any changes made to prescribed treatment to attending doctor				
27. Assist doctor with diagnostic / therapeutic interventions :				
27.1 Angiography				
27.2 Insertion of intra aortic balloon pump device				
27.3 Insertion of tracheostomy tube				
27.4 Insertion of pulmonary artery catheter				
27.5 Insertion of temporary pacemaker				
28. Manipulate a pulmonary artery catheter :				
28.1 Recognition of wave forms				
28.2 Monitoring of wedge pressure				
28.3 Interpretation of wedge pressure data				
28.4 Determining cardiac output				
28.5 Interpretation of cardiac output data				
28.6 Recognition of spontaneous wedging				
28.7 Resolve above complication without a doctor present				
28.8 Removal of a pulmonary artery catheter				
29. Invasive monitoring lines :				
29.1 Setting up invasive pressure monitoring lines				
29.2 Insertion of arterial pressure monitoring lines by CCRN				
29.3 Removal of invasive pressure monitoring lines :				
29.3.1 Arterial lines				
29.3.2 Central venous pressure lines				
29.3.3 Left atrial lines				
29.3.4 Intracranial pressure monitoring lines				
30. Short term rehabilitation of critically ill patients :				
30.1 Patient education				
30.2 Passive range of motion exercises				
30.3 Pre-operative visits				
30.4 Family education				
31. Care of the dying patient & his family				

1. Activity is covered by the Scope of Practice (No.R.2598 of 30/11/1984 as amended)
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3. Activity is not a nursing function
4. If (3) is chosen, indicate who should fulfil this function.

Abbreviations used :

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Hb haemoglobin

ACTIVITY	1	2	3	4	5
32. Fluid balance :					
32.1 Assess patient's fluid balance status					
32.2 Adjust oral fluid intake based on nursing assessment					
32.3 Adjust intravenous fluid intake based on nursing assessment					
33. Care of patient undergoing dialysis					
34. Operation of dialysis machine by CCRN					
35. Nutrition:					
35.1 Assess patient's nutritional status					
35.2 Obtain enteral access with a fine bore feeding tube					
35.3 Initiate enteral feeding					
35.4 Monitor enteral feeding					
35.5 Initiate total parenteral nutrition infusion via established line					
35.6 Monitor patient receiving total parenteral nutrition					
36. Infection control :					
36.1 Specimen sampling (sputum, urine, blood etc)					
36.2 Ensure universal precautions are followed					
36.3 Develop policies on antibiotic use & administration					
36.4 Implement policies on antibiotic use & administration					
36.5 Develop policies on line & tube changing					
36.6 Implement policies on line & tube changing					
36.7 Educate colleagues , patient and family about infection control					
37. Insertion of drains by CCRN on clinical nursing assessment:					
37.1 Underwater chest drains					
37.2 Transurethral catheter					
37.3 Nasogastric tube					
37.4 Suprapubic urinary catheter					
38. Care of drainage systems :					
38.1 Underwater chest drains					
38.2 Ventricular drains					
38.3 Wound drains					
38.4 Nasogastric tube					
38.5 Urinary drainage					
39. Removal of underwater chest drains by CCRN					

1. Activity is covered by the Scope of Practice (No.R.2598 of 30/11/1984 as amended)
2. Activity is not covered by the Scope of Practice (No.R.2598 of 30/11/1984 as amended), but is performed by the critical care nurse
3. Activity is not a nursing function
4. If (3) is chosen, indicate who should fulfil this function.

Abbreviations used :

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CO₂ carbon dioxide
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Hb haemoglobin

ACTIVITY	1	2	3	4
40. Create & maintain a therapeutic environment:				
40.1 Control of noise				
40.2 Distinction between day and night				
40.3 Supply of clean linen				
40.4 Ensure clean floors, walls, windows				
40.5 Organise repair and maintenance of equipment				
40.6 Determine type and quantity of new equipment				
40.7 Management of ward stock and consumables				
40.8 Develop quality improvement plans				
40.9 Implement & monitor policies to ensure quality care				
40.10 Encourage & manage visitors				
40.11 Safe keeping of patient's property				
41. Move patient between departments (x-ray department, theater etc)				
42. Keep scientific record of patient progress				
43. Staff management :				
43.1 Patient allocation to staff				
43.2 Determine type of staff required against patient needs				
43.3 Inservice training				
43.4 Monitor competence of staff				
43.5 Communicate staff needs to higher management				
43.6 Assist with budget preparation				
43.7 Monitor & manage stress experienced by staff				
44. Implementation of a Living Will				
45. Provide information to medical aid company regarding patient's status				
46. Participate in developing ICU admission criteria for critically ill patients				
47. Assist family in deciding when treatment should be discontinued				
48. Terminate treatment at the request of the family				
49. Administer analgesia for purposes other than pain relief				
50. Close ICU beds when there is a shortage of qualified nursing staff				

Addendum B

Vraelys

Bestek van Praktyk van die Kritiekesorgverpleegkundige

Deel 1 – Demografiese data

Merk u antwoord (✓) in die toepaslike blokkie

1.1 Kwalifikasies :

1.1.1 Voorgraadse studie:

Diploma	Graad

1.1.2 Nagraads / Nabasiese Kritiekesorg kwalifikasie :

Diploma	Graad

1.2 Jare ondervinding in kritiekesorgverpleeging :

1.2.1 Van basiese verpleegkwalifikasie tot kritiekesorgverpleegkunde kwalifikasie:

0 – 1 jaar	1 – 2 jaar	2 – 3 jaar	3 – 4 jaar	4 – 5 jaar	> 5 jaar

1.2.2 Van kritiekesorgverpleegkunde kwalifikasie tot hedendag:

0 – 1 jaar	2 – 3 jaar	4 – 5 jaar	> 6 jaar

1.3 Is U een van die volgende : (merk net een blok)

Skofleier	Eenheidsbestuurder

1.4 Tipe eenheid :

Algemeen	Chirurgies	Kardio - toraks	Koroner	Respiratories	Neurochirurgie

Ander (gee voorbeeld)

Addendum C



Vincent Pallotti Hospital
Alexandra Road Pinelands
Cape Town 7405
PO Box 103
Howard Place 7450

Telephone (021) 506-5111
Facsimile (021) 531-0116
www.afrox.com/healthcare/hospitals/pallotti

7 July, 2001

Ms J Bell
52 Munnik Street
Strand
7140

Dear Janet,

We will be happy to assist you in your research for your thesis.

Kindly contact the unit managers to arrange a suitable date in order to discuss your requirements with regard to distributing your questionnaires.

M.I.C.U – Sr. Eugene Stephanus
506 4017

S.I.C.U – Sr. Pat Lubobo
506 4007

I trust all is well with Bell Junior?

Best wishes,

A handwritten signature in black ink, appearing to read "Lou Pretorius".

LOU PRETORIUS
DEPUTY NURSING MANAGER

Addendum D

City Park Hospital

181 Langmarkof Street, Cape Town, 8001, PO Box 15364, Vloeberg, 8018
TELEPHONE +27 (21) 480 6111 FACSIMILE +27 (21) 426 1451

Ms J. Bell
52 Munnik Street
STRAND
7140

18 June 2001

Dear Miss Bell

**RE: REQUEST FOR PERMISSION TO DISTRIBUTE REASEARCH
QUESTIONNAIRES**

I hereby grant you permission to distribute your questionnaires at City Park Hospital. We have three intensive care units:

WARD / UNIT	UNIT MANAGER
Surgical Intensive Care	SR Hester Geyser
Coronary Care Intensive Care Unit	SR Alice Lawrence
Neonatal Intensive Care Unit	SR Liz Hudson

The above Unit managers are the people you need to contact re distribution of your questionnaires.

Could you, in the future, refer all written communication to DR E. Lotz, our General Hospital Manager?

Kind regards



MOIRA GOCH
NURSING SERVICES MANAGER



Addendum E

N1 City Hospital

10476e Rattman Street, Goodwood, 7460, P.O. Box 12581, N1 City, 7463
TELEPHONE +27 (21) 590-4444 FACSIMILE +27 (21) 595-2304
E-MAIL ADDRESS n1hosp@netcare.com
WEB ADDRESS www.netcare.co.za

7 June 2001

Janet Bell
52 Munnik street
Strand
4140

Janet

Request for permission to distribute research questionnaires

Your letter dated, 28 May 2001 refers.

You are welcome to distribute your questionnaires to our critical care nurses.

We would like to have a copy of the thesis / results.

Contact person: Mrs Lettie Blom
Deputy Nursing Service Manager
590-4444



Mrs Lettie Blom
Deputy-Nursing Service manager

Erina:cicu-st



DIRECTORS Dr. J. Shovel, Dr. R.H. Friedland, Dr. G.H.J. Coetzee, Dr. M.L.S. De Kock, Dr. J. Snyman REGISTRATION NO. 99/07336/07