

**Health care staff experiences of delayed transfer of
critically ill patients from an emergency centre in the
Western Cape, South Africa**

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1913-2018

Thesis presented in partial fulfilment of the requirements
for the degree of Masters of Nursing Science
in the Faculty of Medicine and Health Sciences
at Stellenbosch University

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March 2018

DECLARATION

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ABSTRACT

Background

Globally, critically ill patients are accommodated in emergency centres for different reasons. One of these reasons is delay in transfer for admission purposes. The purpose of this study was to explore the experiences of health care staff with regard to delayed transfer of critically ill patients from an emergency centre in the Western Cape, South Africa.

Methods

A descriptive design with a qualitative approach was used. A total of ten (N=10) participants took part in the study. A self-developed semi-structured interview guide with open-ended questions and probes were used during data collection. The Health Research Ethics Committee at Stellenbosch University, South Africa gave approval for the study. Approval was also received from the Western Cape Government Health Department and the senior medical manager of the regional hospital to conduct the study at the emergency centre. Informed written consent was obtained from all the participants as well as consent to use a digital recorder. Themes were identified during data analysis and verified with the academic supervisor. Themes are described in the researcher's analogy of an engine as follows: resource engine, staff engine, critical care patient engine and emergency centre engine.

Results

The findings of the study showed that delayed transfer of critically ill patients from the emergency centre leads to pressure on the health care workers in the emergency centre and ultimately compromises the patient in need of quality care. The recommendations for strategic management are thus to recruit critical care staff, to support further education of staff, and to utilise the high care unit appropriately.

Keywords

Critically ill, emergency centre, delayed transfer, quality care.

OPSOMMING

Agtergrond

Kritieke siek pasiënte word gesien in noodeenhede met verskillende siektestoestande. Wêreldwyd word kritiese siek pasiënte geakkomodeer in noodgevalle eenhede. Een van die redes is vertraging in saal opname. Die doel van die studie is om personeel se ervarings ten opsigte van vertraging in oorplasing van kritieke pasiënte in 'n noodeenheid in die Wes-Kaap, Suid-Afrika te ondersoek.

Metode

'n Beskrywende model met 'n kwalitatiewe benadering was gebruik. 'n Totaal van tien (N=10) persone het deelgeneem aan die studie. 'n Self-ontwikkelde semi-gestruktureerde onderhoudgids met oop vrae en peilvrae was gebruik in die data kolleksie. Die Etiese Navorsingskomitee van die Universiteit van Stellenbosch, Suid-Afrika het die studie goedgekeur. Goedkeuring was ook ontvang van die Westelike Provinsiale Regerings departement van Gesondheid en die senior mediese bestuurder van die hospitaal om die studie te onderneem in die noodsentrum. Skriftelike en ingeligte toestemming was by al die deelnemers gekry wat die digitale opname van die onderhoude insluit. Temas was geïdentifiseer gedurende data analise en was geverifieer met die akademiese toesighouer. Temas is beskryf volgens die navorser se analogie van 'n engin as volg: hulpbronne engin, personeel engin, kritiekesorg pasiënt engin en noodsentrum engin.

Resultate

Die resultate van die studie het bewys dat 'n vertraging in die oorplasing van die kritieke siek pasiënt lei tot 'n verhoogde werkslading op die gesondheidswerkers in die noodsentrum en is uiteindelik tot nadeel van die pasiënt wat nie goeie kwaliteit versorging ontvang nie. Die aanbevelings is dat personeel opgelei en gewerf moet word en dat 'n meer doelgerigte verbruik van die hoësoorgeenheid tot verbeterde pasiënt uitkomst sal lei.

Sleutelwoorde

Kritiekesorg, noodsentrum, vertraagde oorplasing, kwaliteitsorg.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to:

- My God, without whom I could not have completed this study.
- Dr Guinevere Lourens, my supervisor, thank you for all the valued time and input. You are a true role model for our profession.
- The lecturers at Stellenbosch University Department of Nursing and Midwifery for your assistance in the world of research. I appreciate the learning experience.
- Western Cape Government of Health, thank you for granting me permission to do the study.
- Hospital Management, thank you for granting me permission to carry out the research at your institution.
- To the research participants, for your willingness to participate in the study. Despite challenging conditions, you are all remarkable people.
- Dr Marco Kogels, my fiancé, thank you for always believing in me, I can't wait to be your wife. You're my plus one.
- My mother, Marietta, for all the times you had to be alone while I was studying. Thank you Mom for your unconditional love and support.
- My sisters, Karin and Brenda, thank you for believing in your baby sister.
- My dear colleagues, Tienike and Nonnie, for their patience in listening.
- Miss Selene Delpont, for editing the manuscript.

DEDICATION

This dissertation is dedicated to my brother,

Adriaan Bester

(1976-19-09 2002-12-24)

and father,

Karel Christiaan Bester

(1943-11-20 2007-09-03)

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ABBREVIATIONS

DENOSA	Democratic Nursing Organisation of South Africa
DoH	Department of Health
EC	Emergency Centre
ECICU	Emergency Centre Intensive Care Units
ICU	Intensive Care Unit
NDoH	National Department of Health
NHI	National Health Insurance
SA	South Africa
SANC	South African Nursing Council
SATS	South African Triage Scale
WHO	World Health Organization

CHAPTER 1

FOUNDATION OF THE STUDY

1.1 INTRODUCTION

South African government hospitals are poorly resourced, overcrowded, understaffed and underfunded (Rosedale, Smith, Davies & Wood, 2011:537). In South Africa (SA), the trauma cases load is one of the highest in the world (Hoffman, 2014:25). SA has high mortality levels resulting from a quadruple disease burden of TB, HIV and chronic diseases (Bradshaw, Groenewald, Laubscher, Nannan, Nojilana, Pieterse, Schneider, Bourne, Timæus, Dorrington & Johnson, 2003:682). Only 23% of the 396 public hospitals in SA have critical care units (De Beer, Brysiewicz & Bhengu, 2011:6). However, the need for intensive care nursing in SA grows due to demographic changes that further contribute to pressure on South African health care services (Mayosi & Benatar, 2014:1347). This results in decreased availability of already limited critical care resources and delays in transfer of critically ill patients from the emergency centres (EC) to critical care units.

Therefore, the researcher explored registered nurses, medical staff and management of the EC as well as senior hospital manager's experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA. This chapter provides a background to the study, the rationale for this research, aim of the study, the research questions, and methodology. Further explanation will follow on the outline of the proposed chapters.

1.2 RATIONALE AND BACKGROUND

According to the White Paper on National Health Insurance (NHI) (Republic of South Africa: DoH, 2015:12), the health system of SA is facing numerous obstacles. The two main problems are structural issues and the high burden of disease. The structural problems include finances, expenditure, quality of care and inadequate human resources. The rationale for this study is based on the requirements of the National Core Standards for Health establishments in SA as well the Department of Health (DoH) Western Cape Government 2030 Strategic framework (Western Cape Government: Health, 2014:19). The National Core Standards are structured into different domains. Domain two addresses patient safety, clinical governance and

clinical care. This covers quality nursing care, ethical practice, reducing harm to health care users or patients, preventing and managing health care associated infections, and support to staff and patients (Republic of South Africa: DoH, 2011:8). The strategic framework focuses on seven principles of which the first is patient-centred quality of care (Western Cape Government: Health, 2014:19). This principle includes the critically ill patient.

Gordon, Allorto and Wise (2015:492) state that the limited critical care resources are due to the focus on primary health care development, leaving other infrastructure underdeveloped. According to Khan (2013:1), a special grant was allocated to certain provincial health departments to strengthen the health care system. This grant, in support of the NHI, was poorly utilised because only a fraction was spent. It is evident that critically ill patients have specific needs and resources are limited. According to the Western Cape Government: Provincial Treasury (2015b:7), tuberculosis has the highest provincial incidence in the Cape Winelands District, where this study was conducted. It also holds the second highest number of people on HIV-therapy in the province. A situational analysis of the hospital under study indicates that patients with tuberculosis and HIV contribute to the high patient load in the EC (Hospital statistics, 2015:7). These patients often need respiratory support and long-term care. The DoH is currently preparing for the implementation of NHI (Republic of South Africa: DoH, 2015:1). NHI exists to ensure equitable and comprehensive quality care to the people of SA. This system was launched in 2008 and is piloted in certain health districts (Republic of South Africa: DoH, 2015:4). The South African public is more informed about their rights with regard to health care and they may lodge a complaint if they can prove the clinical management affected them negatively (Nortjé & Hoffmann, 2016:47). Therefore, this study investigated the experience of health care staff in an EC with regard to delayed transfer of critically ill patients.

1.3 RESEARCH PROBLEM

The researcher has observed in her personal capacity that patients requiring critical care nursing are accommodated for extended periods in ECs. This means that they stay in the EC for more than a six-hour period. The staff at the EC need to nurse the critically ill patients and ensure care to the normal flow of patients entering the EC.

The dual function of caring for critically ill patients and patients requiring emergency care creates a possibility that the rendering of quality care may be compromised. The extended accommodation of critically ill patients in EC in SA has not been explored extensively. The problem is that critically ill patients are accommodated in the EC and staff experiences on this issue needs to be explored to shed light on this important health care issue. For these reasons, research was required to explore health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA.

1.4 RESEARCH QUESTION

What are the health care staff's experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA?

1.5 PURPOSE OF THE STUDY

The purpose of the study was to explore health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA.

1.6 OBJECTIVES OF THE STUDY

The objectives of the study are to:

- Explore health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA.
- Describe health care staff concerns about critically ill patients in the EC.
- Obtain recommendations from health care staff on caring for the critically ill patients in the EC.

1.7 RESEARCH METHODOLOGY

The research methodology for this study will be described and discussed in detail in Chapter 3, but a brief outline follows below.

1.7.1 Research design

A descriptive qualitative design was used to explore health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA. According to Grove, Gray and Burns (2014:67) qualitative research is used to describe the experience from the lives of humans in the situation. Furthermore, they

state that by engaging in this design, the researcher performs a thorough assessment of meaning, experience, behavior and understanding. Qualitative research gives the researcher insight and knowledge to be supportive and to contribute to health care development (Grove et al., 2014:67). Therefore, interviews about health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA were sources of evidence for this study due to the rich data they provide.

1.7.2 Study setting

The study setting refers to the place where the data was collected (Grove et al., 2014:38). In this research study, the setting was the EC of a regional hospital in the Western Cape, SA. This hospital is classified as a regional (level 2) hospital. Regional hospitals receive referrals from clinics and district hospitals to provide specialised care (DoH, 2013). This hospital was upgraded recently as part of the DoH revitalisation programme to improve service delivery (Lourens, 2015:1).

The EC has an annual census of approximately 40 000 visits per year (Hospital statistics, 2011 – 2015). The EC operates with a total of 13 medical doctors and 20 registered nurses of whom only eight are qualified in trauma and emergency and two are qualified in critical care (Hospital statistics, 2016:7). A high care unit was built but only two of the six beds are currently in operation due to budgetary constraints. This situation leads to patients being accommodated in the EC for extended periods of time. Extended accommodations mean for more than six hours in the EC.

1.7.3 Population and sampling

The research population of healthcare staff included all registered nurses, medical staff and management of the EC, as well as senior hospital managers. The participants were purposively sampled.

1.7.4 Inclusion criteria

In this study, registered nurses, medical staff as well as management of the EC and hospital at a regional hospital in the Western Cape, SA were included.

1.7.5 Pilot interview

The researcher conducted one (1) pilot interview in preparation for the formal interviews. The data from the pilot interview was included in the main study to give a voice to the participants. The interview questionnaire was applicable to this research question and objectives.

1.7.6 Trustworthiness

Trustworthiness, in qualitative studies, is associated with greater worth and thoroughness in collecting data and analysis (Grove et al., 2014:68). Criteria to ensure trustworthiness in qualitative research, as proposed by Guba and Lincoln in 1985, are credibility, transferability, dependability, and confirmability (Grove et al., 2014:392). These criteria are explained below.

According to Grove et al. (2014:392) to ensure credibility, the data collected by the researcher must reflect true value to the participant. Shenton (2004:64) further noted that, to test for credibility, the question should be asked: "How congruent are the findings with reality?" Credibility was ensured by the researcher by listening to the digital recording numerous times and she also made field notes after each interview. Member checking, as proposed by Guba and Lincoln (1985), was done to test the data originally obtained from participants. The participants' different viewpoints were compared with each other.

Transferability, according to Grove et al. (2014:392), refers to data that can be transferred to other settings. The researcher obtained sufficient information on the research question to provide an understanding of health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA. Although each setting is unique, readers that find this study similar to their situation may relate it to their own position (Shenton, 2004:69).

Dependability is another criteria proposed by Grove et al. (2014:392) to establish the trustworthiness. Data collection and analysis for this study was verified by the academic supervisor. This process comprised of listening to recordings, reviewing transcripts, and verifying thematic coding.

Confirmability refers to the agreement between the researcher's findings and interpretation (Grove et al., 2014:392). This was done by clarifying data with

participants so that they can clarify their perspectives on the topic under study by using probes in the interviews.

1.7.7 Data collection

The researcher carried out individual interviews with participants based on the objectives of the study. The researcher received two days training at Stellenbosch University with regard to interviewing skills in March 2017. Informed written consent was obtained by the researcher from the purposively selected participants at the hospital. A digital voice recorder was used to capture the data. Participants who voluntarily indicated their willingness were interviewed in a private venue. These participants fitted the inclusion criteria of the study.

Interviews with medical staff and management of the EC were carried out and held in their offices on appointment. Interviews with nursing staff were held in a private venue outside the hospital on their leave day as requested by the operational manager. One interview was conducted in the office of a registered nurse at a scheduled appointment. The study was carried out over a one month period in July 2017. Data collection was managed by the researcher who created her own organisational plan, as recommended by Grove et al. (2014:88), to ensure preparation for the interviews. This included a recording device, consent documents, time management, and the documentation of field notes after the interviews.

1.7.8 Data analysis

Data analysis in a qualitative study occurs in conjunction with data collection (Grove et al., 2014:88). Furthermore, the purpose of data analysis is to organise, manage, and give meaning to data. LoBiondo-Wood and Haber (2013:279) indicate that content analysis is a method of analysing word responses to the research question, identifying similar responses, and grouping them into themes. The researcher involved her academic supervisor at the Stellenbosch University Department of Nursing and Midwifery to provide feedback on the integration of data sources. Transcription was used to capture the participant's own words, language, and expressions (Grove et al., 2014:88).

In addition, Creswell's (2014:196-200) guideline was used to assist in the coding process. This represents a linear, hierarchical process that is interrelated and does not necessarily follow in the order they are given. Grove et al. (2014:89) states that coding is a process of reading the data, breaking text down into subparts, and labelling that part of the text. Furthermore, themes that emerge as codes are combined into more abstract phrases or terms. These guidelines assisted the researcher to organise, prepare, read, code, and identify themes to obtain the results and interpret the experiences of health care staff with regard to delayed transfer of the critically ill patient from the EC. This guideline enhances rigour and credibility of the findings.

1.8 ETHICAL CONSIDERATIONS

Permission to undertake the research was obtained from the Health Research Ethics Committee of Stellenbosch University. This study proposal was reviewed by the Health Research Ethics Committee of Stellenbosch University (S17/03/056). A systematic framework on ethical principles by Emanuel, Wendler, Killen and Grady (2004:935) was applied. This framework specified the practical considerations regarding ethics in developing countries. Approval to conduct the research at a public health facility EC was also obtained from the Western Cape Government: Health (Provincial Research Coordinating Committee). Further approval was obtained from the senior medical manager of the regional hospital where the research was undertaken. Invitations were hand delivered by the researcher to inform the participants of the purpose of the research. The following ethical principles were ensured in the study to prevent harm and deception to participants.

1.8.1 Informed consent

Participation in the study was voluntary. Detailed information was given to the participants regarding the study and they understood the reason for their participation. The rights of the participants were explained and they were informed that they have the right to withdraw from the study at any time. Signed consent forms and verbal consent for tape recordings were obtained in a language that the participants understood. The researcher is bilingual in English and Afrikaans and conducted the interviews according to each participant's preference.

1.8.2 Confidentiality and anonymity

Confidentiality, according to Grove et al. (2014:107), is the researcher's management of information in the study. Confidentiality was ensured by giving each participant a code; for example, the first interview was coded as Interview 1. The researcher ensured anonymity of the participants by not mentioning the names of participants in the findings. The researcher maintained confidentiality by storing data in a password protected folder on an external hard drive to which only the researcher has access.

1.8.3 Justice

Moodley (2011:73) describes justice as a principle of fairness. Participants had a fair chance to be included in the study. The researcher informed the staff two weeks before the interviews. The study only reflected the health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA. No information, accusation or perception of the researcher was included in the study.

1.8.4 Non-maleficence

Non-maleficence, according to Dhai and McQuoid-Mason (2010:14), is to avoid harm from occurring. Health care staff's wellbeing was ensured during the study. The researcher ensured that all participants were comfortable and relaxed before the interview commenced. Participants were informed of available telephonic counselling from the Independent Counselling and Advisory Services and were observed for potential discomfort during and after the interview. A telephone was available with sufficient airtime to contact the counselling service. Refreshments were provided for participants. Participants were interviewed at a time convenient for them.

1.9 THEORETICAL FRAMEWORK

Theories are the ideas and knowledge of science (Grove et al., 2014:190). Additionally, theories direct health care professionals in clinical practice and research. Grove et al. (2014:190) also state that theories provide knowledge and insight about an unknown phenomenon. The researcher chose Ludwig von Bertalanffy's (1972:404) general system theory for its application in management, leadership, and change in health care. This theory according to Kearney-Nunnery (2016:29) applies principles to human and organisational systems. It has been used

to explain nursing and health care delivery globally. A theoretical framework directs the development of the study and assists researchers to combine findings into understandable knowledge (Grove et al., 2014:198). Furthermore, a framework is a structure of important elements that adds value to a study and gives knowledge to a researcher. Management of critical care resources and the applications thereof is essential to the theoretical framework for this study. Health care administration directly influences resources for critically ill patients. Resources are vital in the delivery of quality care to these patients. Quality care and staff morale are affected when these are not available. This study aimed to apply the theoretical framework to identify health care staff experiences of delayed transfer of critically ill patients from an EC. The applications thereof to the research question will be discussed further on in the text.

1.11 OPERATIONAL DEFINITIONS

To improve understanding in this research study the meaning of the following terms are explained:

Critical Care Nurse	A registered nurse who has completed and registered for additional qualifications in Critical Care Nursing. https://en.oxforddictionaries.com/definition/critical_care
Critical care	Specialised care of patients whose conditions are life-threatening and who require comprehensive care. https://en.oxforddictionaries.com/definition/critical_care
Healthcare staff	Doctors and registered nurses only. https://en.oxforddictionaries.com/definition/healthcare
Medical management	Director of operations in a healthcare facility. https://en.oxforddictionaries.com/definition/doctor
Scope of practice	The procedures, actions, and processes that a health care practitioner is permitted to undertake in keeping with the terms of their professional license.

<http://www.sanc.co.za/pdf/Competencies/SANC%20Relationship%20between%20SOPs,%20Practice%20Standards%20and%20Competencies.pdf>

Sister	A professional nurse. https://en.oxforddictionaries.com/definition/registered_nurse
Trauma	Injury or damage to a person caused by physical harm from an external source. https://en.oxforddictionaries.com/definition/trauma
Triage	A system which decides the order of treatment of a large number of patients or casualties. https://en.oxforddictionaries.com/definition/triage
Ventilator	An appliance for artificial respiration. https://en.oxforddictionaries.com/definition/ventilator

1.12 DURATION OF THE STUDY

Once academic and government ethics approval were granted in May 2017, data collection commenced. The duration of data collection was over the month of July 2017. Data analysis was done and the thesis submitted on 1 December 2017 for examination.

1.13 CHAPTER OUTLINE

Chapter 1 is an introduction and a background to the research. This includes the rationale, aim and objectives, research methodology, and study outline.

Chapter 2 presents the literature review pertaining to experiences of health care staff about delayed transfer of critically ill patients from an EC in the Western Cape, SA.

Chapter 3 offers an in-depth description of the research methodology for this study.

Chapter 4 presents the research analysis of data with the interpretation of the results from the study.

Chapter 5 provides the discussion, conclusion, recommendations, and limitations identified in the study.

1.14 SIGNIFICANCE OF THE STUDY

Health care professionals act as advocates to patients with regard to their knowledge, experience, and skills (Maryland & Gonzalez, 2012:2). Additionally, by engaging in this process health care access, cost, and quality, improve. Delayed transfer of critically ill patients has shown further deterioration and an increase in mortality while waiting for a critical care bed to become available (Cardoso, Grion, Matsuo, Anami, Kauss, Seko & Bonametti, 2011:7).

This study intended to shed light on the health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA. The input given by health care staff can be of great value in developing initiatives to improve the care of critically ill patients in the EC of this health care facility and elsewhere.

1.15 SUMMARY

In Chapter 1, an introduction and rationale for the study were described. The aim, objectives, research methodology and ethical considerations for the research study were outlined. The important role theory and a conceptual framework presents in research were introduced. Operational definitions were explained, including the data collection and chapter outline of the study.

This chapter gives a brief background and the motivation for this research study. The purpose was to introduce the topic regarding health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA. Lastly, the objectives, research methodology, and ethical considerations of the study were introduced.

1.16 CONCLUSION

Critically ill patients should be primarily stabilised in an EC and then transferred to a dedicated unit within six hours. These patients often cannot speak for themselves and health care professionals must protect their rights. If we do not address this problem the patient would be negatively affected and hospital stay and mortality will increase.

The focus of this research study was to explore the experiences of health care staff about delayed transfer of critically ill patients from an EC at a regional hospital in the Western Cape, SA. In the following chapter, the literature that relates to the study, will be discussed.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

In chapter 1, the significance of the study was explained as well as the research aim and objectives for this study. This chapter will focus on the critically ill patient with regard to delayed transfer from an emergency centre (EC) and will highlight international research studies. There is a scarcity of literature in the African context and in South Africa (SA). In addition, qualifications for emergency staff, scope of practice, and quality of care pertaining the critically ill patient are also discussed.

2.2 REVIEWING AND PRESENTING THE LITERATURE

The literature review shares the results of other studies that are related to the one being undertaken (Creswell, 2012:60) and provides a framework for establishing the importance of the study. The aim of this literature review was to ascertain the latest research spanning the past five to ten years globally, in Sub-Saharan Africa and in SA. The literature review process started in February 2016 when the researcher commenced her studies at Stellenbosch University, Western Cape, SA. During this process, the researcher encountered a vast amount of international literature related to this topic. Supported by a librarian at Stellenbosch University, to ensure a thorough search, the following databases were used: PUBMED, CINAHL, EBSCOhost, the South African Department of Health (DoH) and South African Nursing Council (SANC) website. A lack of literature was confirmed in the African context.

2.3 CRITICAL CARE: AN OVERVIEW

Historical critical care documents revealed that, since the arrival of critical care in the 1980s, principles of triage have been used to establish admission criteria to critical care units (National Institute of Health, 1983:1). Masterson and Baudouin (2015:21) define a critical care unit as “a specially staffed and equipped, separate and self-contained area of a hospital dedicated to the management and monitoring of patients with life-threatening conditions”. Critical care nursing, according to De Beer et al. (2011:6), is a particular field of work that entails caring for patients who are suffering

from dangerous diseases or trauma. Critical care is delivered globally in specialised units with sophisticated equipment and qualified staff to render care to patients (Prin & Wunsch, 2012:2). The objectives of a critical care unit are to monitor and support vital organs in critically ill patients to improve outcome (Valentin & Ferdinande, 2011:2). Additionally, the World Federation of Critical Care Nurses (2017:1) state that the principle objective of critical care is to deliver the best standards of critical care for all mankind without discrimination. This resonates with the South African DoH (2014:3) objectives in providing a health care system with guidelines, norms, and standards that address the delivery of quality health care services.

2.3.1 Health care system in South Africa

The health care system in SA comprises primary, regional, provincial, and national levels (Jobson, 2015:3). The first line of access for people needing hospital-based health care services is district hospitals. The next tier is the regional hospitals to which patients are referred when they need more complex treatment. Furthermore, the regional hospitals refer to tertiary hospitals that are academic hospitals where advanced treatment is provided. The last tier refers to specialised hospitals that provide treatment to patients who need psychiatric assistance. Categories of hospitals in SA are defined by the National Department of Health (NDoH) and published as a Government Gazette Notice (Republic of South Africa, 2012) (see breakdown in Table 2.1).

Critical care services in SA are also divided into four levels that render different critical care services to the public (De Beer et al., 2011:8). Level one refers to critical care units in a tertiary hospital where advanced technological equipment are utilised to manage the critically ill patient. These units are managed by specialised doctors and have a nurse/patient ratio of 1:1 or 1:2. Level two refers to specialised units for system related diseases like coronary and neurological illnesses. Level three critical care units are in the regional hospitals and level four are high care units in the district hospitals (see breakdown in Table 2.2).

Table 2.1: Level of care in South African provincial hospitals

Level of care	Department of Health in South Africa
4	National Central Hospitals (Specialised Hospitals e.g. Psychiatric units) (May provide critical care services)
3	Provincial Tertiary Hospitals (May provide critical care services)
2	Regional Hospitals (May provide short-term ventilations)
1	District Hospitals (Only provide high care beds, no ventilations)

Table 2.2: Level of care in critical care service

Level of care	Critical care in South Africa
1	Academic Critical Care Units in Tertiary Hospitals
2	Specialised Units in Private Hospitals and Tertiary Hospitals
3	Critical Care Units in Regional Hospitals
4	High Care Units in District Hospitals

Murthy, Leligdowicz and Adhikari (2015:1) mention that critical care unit's capacity in low-income countries to render care to the critically ill is relatively unknown. Furthermore, they state that there is no published data regarding the availability of critical care physical resources, health care professionals, and critical care beds in these countries.

SA has limited critical care resources (Scribante & Bhagwanjee, 2007:1311). Additionally, the National Audit of Critical Care indicated that the Western Cape critical care bed-to-population ratio was 1:14 000. SA is challenged by an acute shortage of ICU trained nurses (De Beer et al., 2011:8). The shortage of skilled nurses has resulted in nurses working more than the recommended hours resulting in them being exhausted, with a decreased level of alertness and low morale (De Beer et al., 2011:8). Critical care nurses, also known as professional nurses, obtain their qualifications at an authorised institution and register for the additional qualification (R212) for Critical Care Nursing under the SANC (SANC, 2005:R2598).

2.3.2 South African Nursing Council: Scope of practice

The scope of practice compiled by the SANC (2014:2) sets the guidelines for the level at which their different members are authorised to function. Critical care nurses responsibilities include clinical assessment, forming a diagnosis and drawing specific care plans for the patients to reach the desired health outcomes (Matlakala, Bezuidenhout & Botha, 2014:7). The scope of practice for the critical care nurse is broad where intricate, highly skilled nursing care is rendered (SANC, 2014:1). In SA, critical care nursing and emergency nursing are two different postgraduate qualifications that a nurse can obtain from different institutions in SA (Scribante & Bhagwanjee, 2006:78).

2.4 QUALITY OF CARE

The World Health Organization (WHO, 2016a:14) defines quality of care as having the following components: an effective, efficient, accessible, acceptable, equitable, and safe health care delivery system. Quality care, according to Andel, Davidow, Hollander and Moreno (2012:45), is “less expensive”, more efficient, and less wasteful. It is the right care, at the right time, every time. For the patient a multi-disciplinary approach improves the quality of health care (Australian Commission on Safety and Quality in Health Care, 2010:15). In SA, the Western Cape Government DoH, along with the Negotiated Service Delivery Agreement, set strategic goals that reflect the commitment to quality care (DoH, 2015:2). The purpose of this goal is to focus on the importance of delivering quality services. The core standards for admitting critically ill patients to a critical care unit are within 4 hours of decision

making to minimise delay in treatment and improve outcome (Intensive Care Society, 2013:16).

2.5 CRITICALLY ILL PATIENTS

Critically ill patients, who are ventilated, require complex management to prevent complications (Rose, 2012:5). Furthermore, these patients need constant monitoring and ECs do not have the resources to attend to these patients. In a study by McHugh, Kelly, Smith, Wu, Vanak and Aiken (2013:10) patient outcomes in United States were enhanced as a result of qualified skilled nurses, a better work setting and foundation of quality care. Critically ill patients that remain longer in the EC could deteriorate due to the fact that the doctor who is responsible for their care is not observing them (Cowan & Trzeciak, 2004:292). This could lead to delay in recognition of deterioration and management. Lilly and Katz (2016:1119) note that the management of critically ill patients is a complex field that needs to be rendered by a dedicated multi-disciplinary team. They also mention that intervention in this specialty is time-sensitive to ensure quality of care.

In a French study, critically ill patients were accommodated in non-dedicated units (Quintard, Severac, Martin & Ichai, 2015:227). These units included the recovery room, operating room, and EC. They found that the emergency doctor's experience was not that of a specialised doctor and that it negatively influenced the quality of care for the critically ill patient. Their study noted that the emergency doctor usually attends to a mix of patients of whom 80% have less severe conditions and are therefore not familiar with the critically ill.

A study done by Varndell, Fry and Elliott (2015:3290) on Australian emergency nurses' perception, indicated that the emergency nurses felt uneasy, anxious, and requested support when managing the critically ill patient. Tunlind, Granström and Engström (2015:116) describe the critical care environment as a highly technical area and health care workers must have knowledge with regard to managing and interpreting data from equipment such as respiratory ventilators, renal dialysis machines, and cardiac monitors. In a South African study on nursing unit managers' provision of quality patient care it was found that staff shortages, performance problems, and resource constraints contribute to the difficulties for delivering quality

care (Armstrong, Rispel & Penn-Kekana, 2015:8). The South African DoH (2015:3) states that it is strengthening the health care system by addressing the lack of resources to improve the service delivery.

2.6 LACK OF CRITICAL CARE BEDS

The unavailability of critical beds can negatively affect hospital operations and increase mortality due to prolonged waiting times (Cardoso et al., 2011:1). The American Hospital Association reports that the average waiting time for a critical care bed in America is more than three hours (Cowan & Trzeciak, 2004:292). The time doubles when the hospital has consistent emergency overcrowding. Overcrowding, according to Arkun, Briggs, Patel, Datillo, Bove and Birkham (2010:10), is the accommodation of patients in non-dedicated areas like hallways, non-clinical spaces, and doubled-up rooms. Boyle, Beniuk, Higginson and Atkinson (2012:2) mention in their article about emergency overcrowding that the unavailability critical care beds leads to red category patients staying in the EC. Extended accommodation increases mortality, resources may become depleted, and care is compromised.

According to Cowan and Trzeciak (2004:292), overcrowding in the United States has been reported to negatively affect patients' safety. The critically ill patient is already compromised and the EC is a high-risk environment for medical error. Dos Santos, Da Silva Lima, Pestana, Garlet and Erdmann (2013:139) found that overcrowding poses a threat to the delivery of quality care in the EC. The statistical growth of critically ill patients in the United States and the severity of the illness in ECs have increased (Herring et al., 2013:5). Furthermore, they mentioned that an increase in chronic conditions contributed to the prolonged critical care management in the EC.

In certain American hospitals, particularly large academic centers, demand for critical care beds may outstrip supply, evidenced by a 32% increase in emergency department length of stay for critically ill patients between 2001 and 2009 (Herring, Ginde, Fahimi, Alter, Maselli, Espinola, Sullivan & Camargo, 2013:7). An American Heart Association (2012:1408) study found the demand for critical care services has increased globally and the outcome of critically ill patients improved when cared for in a dedicated unit.

Gordon et al. (2015:491) advise that critical care beds in South African countries are scarce and the demand for beds are high. They state that limited resources in low- and middle-income countries lead to patients' admission being delayed. The patients are reviewed by the attending doctor and often admitted to the general ward. A tertiary hospital in America addressed the demand for critical care services and bed availability in their hospital by applying a simulation model to address the situation (Mathews & Long, 2015:886). This model proposes a queueing model with regard to bed availability, patient type, time of arrival, critical unit triage algorithm, length of stay and bed allocation. They concluded in their results that an improvement in critical care bed availability and waiting time was evident due to this model. Cowan and Trzeciak (2004:292) report that ECs are used as extensions of ICUs but are not constructed, supplied or staffed to maintain safe care for the unstable patient.

2.7 EMERGENCY CENTRE

The core function of an EC is swift stabilisation of patients and not protracted care (Cowan & Trzeciak, 2004:292). Furthermore, ECs are designed for triage, stabilisation, and the commencement of treatment. A Canadian study indicated that health care professionals in an EC had a lack of knowledge and clinical skills when attending to post resuscitation patients who needed to be transferred to a critical care unit (Green & McIntyre, 2011:488). South African hospitals use the South African Triage Scale (SATS) system that breaks down patients into five categories: green, yellow, orange, red, and blue (SATS, 2012:1). Patients are prioritised according to severity. The highest level is red and indicates immediate medical management, orange within ten minutes, yellow within 1 hour, green within 4 hours, and blue refers to certification of death by the doctor within 2 hours. The critically ill patient falls within the red category. According to Van Wyk and Jenkins (2014:241), 33% of ECs' admissions in SA are injury related. Their study reveals that appropriate use of the EC needs to improve to prevent obstruction for patients needing urgent attention. They state that health care professionals in ECs need to be well trained in trauma care.

2.8 RATIO

Nursing staff in ECs are responsible for more than one patient, each with a different illness, whereas critical care nurses are required to provide more individualized care (Cowan & Trzeciak, 2004:292). The patient ratio in the EC and the critical care unit differs. In the EC, the patient ratios do not allow for individual attention whereas in the critical care environment the ratio can be expected to 1:1 or 1:2 (Cowan & Trzeciak, 2004:292). Therefore, when critically ill patients are accommodated in the EC, one of two scenarios can be expected to arise: the individual nurse to patient ratio will be affected; or the remaining staff will assume more responsibility.

2.9 DELAYS IN TRANSFER

Every hour of critical care admission delay may escalate the risk of death by 1.5% (Cardoso et al., 2011:1). Adjustments to ECs are being made in the United States of America to accommodate the critically ill patient. Patients are stabilised and then transferred to the Emergency Centre Intensive Care Units (ECICU) where the care continues in the EC (Weingart, Sherwin, Emlet, Tawil, Mayglothling & Rittenberger, 2013:617). Cowan and Trzeciak (2004:291) argue that critically ill patients are dumped in these units due to no capacity.

According to Perkins and Motov (2011:1), delay in transfer of the critically ill from the EC negatively influences mortality, length of stay, and cost in care. They also state that for patients who were transferred to a critical care unit in an acceptable timeframe, ventilation days, length of stay in the critical care unit, and hospital days were significantly shorter. This was also confirmed in a Canadian study by Rose, Scales, Atzema, Burns, Gray, Doing, Kiss, Rubinfeld and Lee (2016:1325) on EC length of stay for critical care admissions. They revealed that the negative incidence of critically ill patients treated in the EC continues to increase due to insufficient critical care bed availability.

2.10 THEORETICAL FRAMEWORK FOR DELAYED TRANSFER OF THE CRITICALLY ILL PATIENTS FROM AN EMERGENCY CENTRE

A theoretical framework, according Swaen (2015:1), illustrates what the researcher expects to find through the research to scientifically prove a particular idea.

Furthermore, the researcher must demonstrate a cause-effect relationship between variables. Variables are the characteristics that the cause-effect relationship describes. The general system theory of Ludwig von Bertalanffy (1972:404) assisted the researcher to identify the components of the theoretical framework. The system theory approach is used by researchers to recommend improvements in the health care system (Howley & Chuang, 2011; Mele, Pels & Polese, 2010). The theoretical framework is divided into two variables, namely dependent and independent variables. In this model, dependent variables represent quality care and staff morale. The independent variables represent resources, waiting time, and management.

The general system theory of Von Bertalanffy (1972:404) is a group of components that interact with each other. Changes in one component will have repercussions for the other and, ultimately, the whole system. Von Bertalanffy (1972:404) divided the theory into closed and open systems. Closed systems are isolated from the environment whereas open systems interact with the environment (Kearney-Nunnery, 2016:28). Components interacting with each other give continuous feedback to the system. This is to obtain the desired results (Kearney-Nunnery, 2016:28). The feedback can be negative or positive and provide information to the organisation regarding the system. The components in system theories, according to Kearney-Nunnery (2016:28), are input, process, output, and the environment (see figure 2.1).

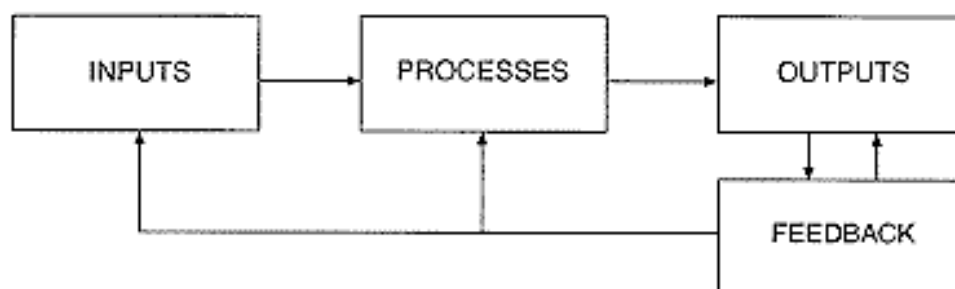


Figure 2.1: General system theory

In this model, the health care system is divided into administrative, clinical, and statistics (Input); policies and infrastructure (Process); and, lastly, staff and patient satisfaction (Output).

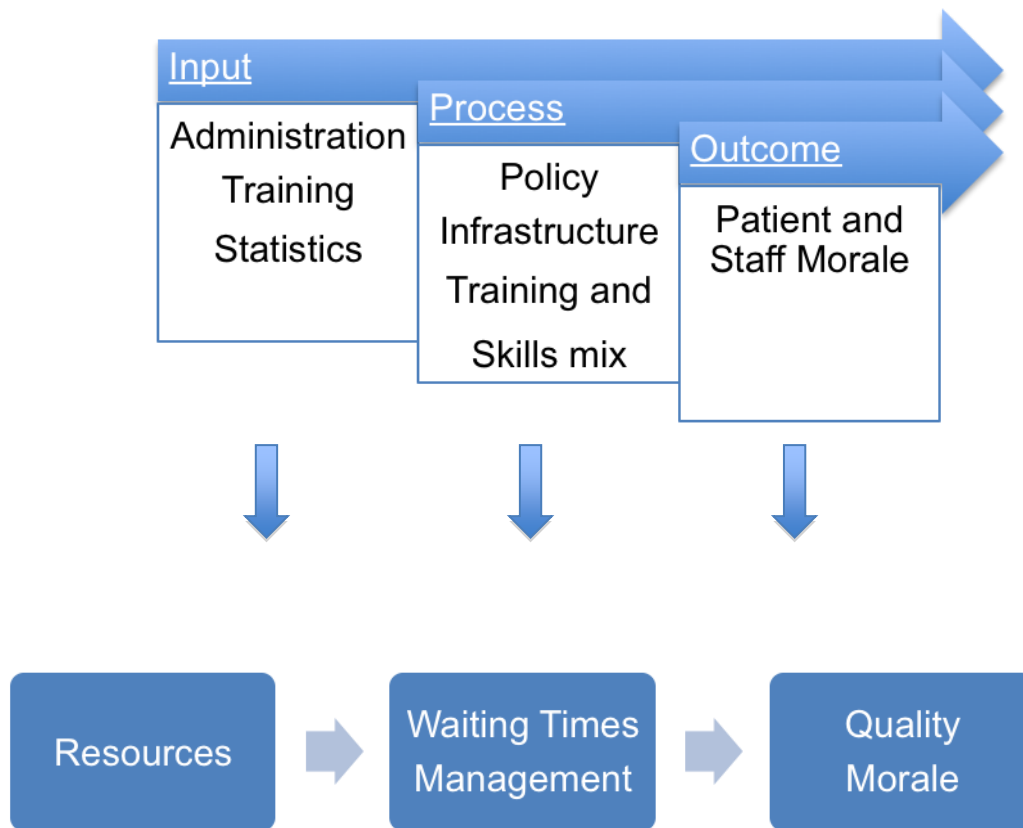


Figure 2.2: Graphic representation of delay transfer of critically ill patients from an emergency centre as adapted from System Theory (Von Bertalanffy, 1972)

The components of the theoretical framework after application to Von Bertalanffy's system theory are explained individually below.

2.10.1 Administration

Health care administration comprises policies, strategic planning, finances, and other administrative tasks (Master Public Health, n.d.:1). According to the WHO (2016b:1), health policies direct decisions, plans, and actions to achieve the goals in health care. Policies are in line with the vision of the organisation and inform the community of standard. Health policies are the planning, development, and implementation of interventions to maintain and improve the health of a group of individuals (Weiner, 2008:6). The policy on critical care admission, discharge, and transfer (Circular H 67 of 2007) of the DoH in SA guides all health care staff in the governance of critical care services. This policy states that critically ill patients' constitutional rights, equity of access, and ethical practice must be ensured by all health care staff (DoH, 2007).

Health policies direct hospital managers to improve service delivery (Hussung, 2016:1). Therefore, forecasting becomes an important function health care managers must fulfil to envisage the future of the facility. This must be in line with the values, perceptions, and expectations of the health care system. Hospitals must have a strategic plan to improve outcome and cost management. Strategic planning is a 5-year plan an organisation puts in place to plan the goals and future of the organisation. The strategic plan is in line with the proposed budget (Booyens, 2015:29).

Budgeting is the forecasting of resources an organisation requires to ensure quality service (Rundio, 2016:5). It is in line with the organisation's goals and objectives and will ensure a functional unit if managed accordingly. Additionally, effective budgeting creates awareness of cost, ensures profitability, reduces waste, and ensures standard service. Nurse managers must ensure cost-effective quality care to patients by mastering the budget (Danna, n.d.). Health services function 24 hours a day and cannot afford errors or failure where patients' lives are at stake (Rani, Baharum, Akbar & Nawawi, 2015:273).

2.10.2 Clinical competence

Clinical competence is the delivery of knowledge and skills (Grove et al., 2014:4). Nursing competency according to Kim and Kim (2014:235) are the skills, knowledge, and decision making a nurse applies in the clinical setting. The SANC (2014:2) describes competence "as a combination of knowledge, skills, traits, attitudes, values, capacity, and ability to deliver care to patients". Furthermore, SANC state that competency "is the building blocks that shape the nursing field in a clinical environment". Competency determines health care professionals' readiness to provide quality care. In SA, nurses work within their scope of practice, which addresses the role and boundaries of practice. Years of experience and educational groundwork promote clinical expertise (Grove et al., 2014:4). According to Lakanmaa, Suominen, Ritmala-Castrén, Vahlberg and Leino-Kilpi (2015:1), critically ill patients benefit from the care of health care professionals with a high level of competence. They describe competence as a multidimensional concept that consists of knowledge, skill, value, experience, and autonomy. Competent critical care nurses have an impact on a patient's physiological and psychological well-being.

2.10.3 Statistics

Statistics are “numerical data that are collected to assist health care professionals in planning for the future” (Booyens, 2015:147). To Sullivan and Decker (2001:163), nurse managers base their decision-making process on the interpretation of data. They apply the data to reach their organisational goals. Nurse managers must evaluate statistics of bed occupancy, triage, and financial statements that affect health care. Statistics of critically ill patients that are accommodated in an EC for extended periods can be used to motivate for additional resources. Adverse events are a good indicator to convince management of risks to patients and health care professionals. A research article by Hanewinckel, Jongman, Wallis and Mulligan (2010:145) on emergency medicine in a regional hospital in SA revealed that 36% of the EC patients’ cases were trauma related. The recommendations from these authors were that data, from research projects, need to be used for future development and improvement in ECs.

2.10.4 Healthcare policy

Health care policy according to Booyens (2015:41) sets the framework for health care staff within which they should practice. These policies direct the goals, objectives, and guidelines to achieve the prescribed outcome. These policies exist to ensure standard of care and legal protection to the service and employees. Rules and regulations describe what can or cannot be done (Booyens, 2015:67). Regulations and policies are developed from different legislation to guide health care professionals and to protect the public against unauthorised, unqualified, and improper practice and conduct (Booyens, 2015:7). Regulations by the Constitution of SA, DoH and the SANC are formulated to ensure safe patient care (Booyens, 2015:7).

The involvement of nurses in policy development can lead to participation in decision-making, ensure health care is safe, available, inexpensive, and that the care is effective (Shariff, 2015:1). Nurses have a positive effect on health care when they are able to influence policies. Nurses’ participation and understanding in policy development would develop a culture of motivation and willingness (Shariff, 2015:1). Job satisfaction is enhanced when nurses have a voice in health care policies (Why South African nurses should no longer be sidelined, 2015). Globally, nurses

contribute to the smooth operation of health care and should be visible in policy development (Shariff, 2015:1).

2.10.5 Infrastructure

Health care facilities must be designed to prevent harm and to improve the health outcomes for users and health care professionals (DoH, 2013:15). The DoH in SA supports the Health Infrastructure Norms Advisory Committee guidelines that direct the infrastructure, norms, and standards for adult critical care facilities in SA (Infrastructure Unit Support Systems, 2014:1). The provision of critical care and high care beds are published in the Government Gazette Notice: R185 and the National Health Act 61/2003 (Republic of South Africa, 2012:1). These guidelines state that a regional hospital may provide short-term ventilation for 4 – 6 hours in a critical care unit. Furthermore, regional hospitals provide general critical care services based on the bed numbers and burden of disease. These beds are divided into medical and surgical critical care beds. The NDoH in SA evaluates the clinical profile of the facility to determine the number of critical care beds allocated (Infrastructure Unit Support Systems, 2014:8). Some of the data that is evaluated includes:

- The source and acuity of patients
- The number of admissions, refused admissions, premature discharges, bed occupancy, and length of stay
- Future developments that may affect critical care service demand
- The number and type of acute beds, operating theatres, and surgical specialities served
- The annual workload of the EC.

The breakdown in table 2.3 represents the calculations of critical care and high care beds planning according the DoH in SA.

Table 2.3: Critical care and high care beds planning in South Africa

Tertiary Hospitals (CCU beds)	Calculated at 10% of acute adult surgical beds. A bed occupancy rate of 78-80 % should be targeted, due to cost and resource intensity.
Regional Hospitals (CCU beds)	Calculated at 1-3% of acute adult surgical beds.
District Hospital (High Care beds)	Calculated at 1% of acute beds.

The review of latest statistics indicates that SA has a total of 4 168 critical care beds (De Beer et al., 2011:6). These beds are distributed 57% in the private and 43% in the provincial sector. The Western Cape Government's Annual Report for 2014/15 report shows an increase of fourteen (14) critical care beds in the Western Cape regional hospitals (Western Cape Government: Provincial Treasury, 2015a:6) (see Table 2.4).

Table 2.4: Strategic objectives for critical care beds in regional hospitals, Western Cape (2014/15)

Strategic objectives	Performance indicators	Actual achievement 2013/14	Planned target 2014/15	Actual achievement 2014/15	Deviation 2014/15
Ensure access to general specialist hospitals	Number of usable beds in regional hospitals	1373	1375	1389	14

The effectiveness of a critical care unit should be evaluated based on size (Infrastructure Unit Support Systems, 2014:8). They advise a 6-12 bed unit for clinical outcome and efficient management. These units allow for better observation, infection control, and patients' privacy. Health care professionals working in a critical care unit have specific needs (Infrastructure Unit Support Systems, 2014:16). Some of these needs are a working environment that reflects best practice; sufficient space around all sides of each bed to provide easy access to the patient and equipment; support services for urgent pathology tests and imaging; and a way to summon help

from other members of staff. Access to critical care units are restricted by staff availability to perform clinical duties. This includes all health care professionals involved in the treatment of the critically ill patient.

2.10.6 Training and skills mix

Training improves professional practice of nursing and patient care (American Nurses Credentialing Centre's Commission, 2014:1). Continuous training and development will provide the type of quality care the patient deserves (Booyens, 2015:211). A descriptive observational study on academic training of nursing professionals revealed that 94.2% of the participants link training to the work place impact on quality care (Ortega, Cecagno, Llor, De Siqueira, Montesinos & Soler, 2015:1). Changes in health care, medical management, and technology advances require continuous training and skills development (Booyens, 2015:211).

Health care organisations that invest in training prevent service failure and health care staff is more committed to the organisation. An environment that values a learning climate, trust, respect, motivation, support, productivity, and work satisfaction, will improve (Booyens, 2015:213). Jehanzeb and Bashir (2013:243) maintains that staff performance is an important factor in organisational success. Therefore, organisations should invest in staff training and development to reach strategic goals. Programmes on development ensure that health care professionals stay longer at an organisation (Kim, Lee, Eudey, Lounsbury & Wede, 2015:51). The SANC advocates for the training of staff, patients, and family of the critically ill patient (SANC, 2014:19).

Managers in health care must ensure that the skills mix caters to the needs of patients (Raihi, Abushagur & Fotia, 2015:362). This includes the assessment of patient ratio, staff training, and work experience of health care professionals. Strategic human resource planning plays an important role in ensuring safe patient care. This planning, according to Raihi et al. (2015:362), influences work environment, teamwork, and the provision of quality care. The National Quality Board of England (2013:1) argues that the right people, with the right skills, must be in the right place at the right time. Management must ensure that there is sufficient staff for all disciplines to ensure quality safe care.

The advancement of technology results in more nursing staff being required in critical care units (Aiken, Sloane, Griffiths, Rafferty, Bruyneel, McHugh, Maier, Moreno-Casbas, Ball, Ausserhofer & Sermeus, 2016:1). A study done on nursing skill mix in European hospitals concluded that a higher number of registered nurses are associated with lower mortality, higher patient ratings of their care, and less adverse events. Another study done by Needleman (2016:1) in the United States supports the above finding. The author concludes that in his study on nursing skill mix and patient outcomes that nurses and patients were dissatisfied with the quality of care. The nursing staff would not recommend their hospital to family or friends and adverse events occurred more frequently. The nursing staff in the Needleman (2016:1) study were not satisfied and burnout rates were high due to quality problems.

2.10.7 Staff satisfaction

Organisations and health care professionals' wellbeing rely on job satisfaction that, in turn, improves productivity (Chaulagain & Khadka, 2012:32). Job satisfaction is the feeling and attitude employees have about their work (Mohase & Khumalo, 2014:94). Absence of motivation, supportive management, equipment, and leadership will lead to poor health care quality. According to Babić, Kordić and Babić (2014:44), factors that enhance performance in health care professionals include professional development, positive working conditions, housing subsidies, salaries, education, and skill improvement.

2.10.8 Patient satisfaction

Patients want to be treated in a way that make them feel that they are important. Patient satisfaction is a good indicator of quality health care (Prakash, 2010:151; Booyens, 2015:269). Satisfied patients are more compliant to regimes and develop a positive relationship with health care (Korda, 2012:1). Patient satisfaction improves the quality of health care and simultaneously reduces hospital cost (Rickert, 2012:1). Schleyer and Curtis (2013:1) state that patient satisfaction in the critical care units are often rated by family members. Furthermore, they reveal families were satisfied with the care their loved ones received in Germany's critical care units.

2.10.9 Resources

The American Hospital Association (Combes & Arespacochaga, 2013:1) advocates that health care resources should be utilised appropriately with the aim on the quality of patient experience, improved health, and lower costs. Furthermore, they state that the unnecessary harm to patients has forced health care professionals to review the use of resources. Denying a potential beneficial treatment to a patient on the ground of scarcity is in effect rationing (Scheunemann & White, 2011:1625). Rationing occurs at different levels in health care where fund allocations will determine whether a patient will receive the medical resource.

This includes the critically ill patients who are refused a critical care admission due to lack of beds (Scheunemann & White, 2011:1625). According to Van Wyk and Jenkins (2014:240), the Western Cape Health Department allocates staff and resources according to the level of need in hospital ECs. Furthermore, they mention that resource allocation has implications for staff and quality of care.

2.10.10 Waiting times

Waiting time can be defined as the length of time from when the patient enters the hospital at the EC until the time the patient leaves the hospital or is admitted to a ward (Dinesh, Sanjeev, Nair & Remya, 2013:1). Waiting time can have negative outcomes on patient care (Duckett & Nijssen-Jordan, 2012:29). Overcrowding of ECs results in long waiting times, which potentially increases morbidity and mortality (Van Wyk & Jenkins, 2014:241). Outcome for critically ill patients in the EC is influenced by optimal time to admission (Hung, Kung, Hung, Liu, Liu, Chew, Chuang, Lee & Lee, 2014:1). Furthermore, the authors found that, for critically ill patients, waiting for more than five hours for a critical care bed the risk of death increased. Another study on the impact of delayed admission to Intensive Care Units (ICU) in Taiwan showed that critically ill patients are compromised if they are not promptly admitted to the critical care unit (Hsieh, Lee, Hsu, Shih, Lu & Lin, 2017:43). They recommend that critically ill patients should not wait longer than one hour for admission in the critical care unit. A research study done by Hardine (2017:87) concluded that staff shortages, patient overload, inappropriate use of the EC, and lack of support contributed to the long waiting time at a regional hospital in the Western Cape, SA.

2.10.11 Management

Executive management in health care is viewed by the WHO (2011:264) as important for the delivering of excellent service. Furthermore, they state that management skills will only be effective with good leadership. Leadership, according to Booyens (2015:242), is the act of unifying people around values. This duo is important for the delivery of good health care services. Nursing managers play an important role in coordinating patient care, safety, and quality (Armstrong, Rispel & Penn-Kekana, 2015:1). Health care management, according to Booyens, Jooste and Sibiyi (2015:1), consists of planning, organising, staffing, leading, and control. Planning directs an organisation in obtaining its goals, gives direction, and allocates human resources. Furthermore, planning holds the following benefits: improved communication, teamwork, staff performance, profitability, and the future focus (Booyens, 2015:22). One important step in health care planning is the assessment of health care needs. Health care managers must assess the environment in which the work must be done along with the people who are responsible for delivering the service (Booyens, 2015:27).

Organisation is the second step in the management process and represents the delegation and coordination of tasks and resources (Booyens, 2015:95). These resources include human, physical, financial, and information technology. Furthermore, managers in charge of units have to organise their day-to-day activities to ensure cost effective, quality, and safe patient care. Parand, Dopson, Renz and Vincent (2014:1) state that it is a manager's legal and moral obligation to ensure quality and safe care. Staffing is the process of recruitment, selection, appointing, orientating, and development (Booyens et al., 2015:15). This is in line with the goals and vision of the organisation and therefore the manager must ensure skilled health care professionals. By employing competent staff, quality of care improves, burnout decreases, and job satisfaction is enhanced. Health care leaders should develop strategies to improve nurse staffing in the EC when a patient awaits critical care admission (Hung et al., 2014:1).

Leading, according to Miri, Mansor, Alkali and Chikaji (2014:31), involves the influence the manager uses to inspire her team. Booyens et al. (2015:15) note that this represents the manager's leadership responsibilities. Managers must supervise,

motivate, manage conflict, and empower her staff. Another function of the manager is the ability to delegate. Managerial control will ensure that performance does not differ from the standard (Miri et al., 2014:31). Booyens et al. (2015:15) hold that for the manager who governs, control is organised, goal orientated, and ensures consistency in the workplace.

2.10.12 Morality and ethics

Morality, as per Dhali and McQuoid-Mason (2010:3), is the philosophy for differentiating between right and wrong, good and evil. Furthermore, morality represents a person's decision-making, actions, and behavior. Pera & Van Tonder (2014:6) states that morality is the norms of conduct that persons or groups present themselves. These norms stem from ethics. Nursing ethics examines the context of a good nurse and the nursing practice in a very challenging setting (Pera & Van Tonder, 2014:8). The International Council of Nurses Code of Ethics for Nurses advocates the principles of health promotion, preventing illness, restoration of health, and alleviating suffering (Pera & Van Tonder, 2014:109).

The relationship between health care professionals and their employers should strive towards quality service delivery. Currently, nurses are held accountable for a failing health care system (Pera & Van Tonder, 2014:132). They are reprimanded over a system over which they do not have control. Additionally, unsafe staff ratios could potentially lead to health care professionals making mistakes. This could lead to moral distress in the workplace. Moral distress is defined as conflict with your own and professional values (Pera & Van Tonder, 2014:135). A research article on moral distress experienced by intensive care nurses revealed that shortage of staff, lack of communication, incompetence, inexperience, and lack of resources contributed to the negative moral climate in health care (Langley, Kisorio & Schmollgruber, 2015:36). This ethical dilemma for nurses nursing critically ill patients in the EC is not well described in literature.

2.10.13 Morale

The Office of Recreation and Park Resources (as cited by McKnight, Ahmad & Schroeder, 2001) define morale "as the motivation or feeling a person has towards his work and the result of job satisfaction". Globally, health care professionals in the

EC experience low morale due to their environment. The stressful environment is a result of high workload (Johnston, Abraham, Greenslade, Thom, Carlstrom, Wallis & Crilly, 2016:7). Some stressors that impact on health care professionals' environment is inappropriate skill-mix, burnout, limited recognition of nurses, and poor quality of work and training. This leads to staff morale and job satisfaction being negatively affected. Morale is further influenced by leadership and management (Johnston et al., 2016:7). The National Health Service in England found that increased workload and a limited budget influence their staff morale (Press Association, 2014).

Managers should be vigilant in improving the morale in the hospital because it influences waiting time and quality of care. Kennedy (2016) explains that more focus must be placed on job satisfaction, working environment and staff morale. If these aspects are not addressed, the result in low staff morale might lead to psychological problems and resignation. A case study on hospital reform and staff morale in SA found that staff is more demotivated (Ibeziako, Chabikuli & Olorunju, 2013:180). The category of hospital will influence the budget allocation from the national government. Currently, hospitals in SA are being transformed as part of National Health Insurance (NHI) preparedness and this has a direct impact on equipment, work environment, and, ultimately, staff morale (Ibeziako et al., 2013:180).

2.11. SUMMARY

Effects on health care staff experiences of delayed transfer of critically ill patients from ECs were reviewed as a problem that can negatively affect the quality of care. To deliver quality, safe care to the critically ill patient, this global phenomenon needs to be addressed to prevent poor patient outcomes and improve service delivery.

2.12 CONCLUSION

In this chapter, literature reviewed highlights the shortcomings of effective nursing management of critical ill patients in the EC, the importance of safe quality care in a dedicated unit and the care by qualified, skilled nurses. Additionally, a conceptual framework representing the research objectives is included. The research methodology applied to this study will be described in chapter 3.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology, according to Kumar (2011:97), is a plan, structure, and strategy of investigations to obtain answers to research questions and problems. Furthermore, it represents a blueprint for how a research study is to be completed to assure valid and reliable results. The research design, population and sampling, pilot study, data collection, data analysis, trustworthiness and ethical considerations as well as limitations of this study will be presented in this chapter.

In chapter 2 the literature was reviewed related to health care staff experiences of delayed transfer of critically ill patients from an emergency centre (EC) globally. The review indicated the need for further study on this issue due to scarcity of literature. In this chapter, the research methodology that was applied to the health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, South Africa (SA) will be described.

3.2 OBJECTIVES

The objectives of the study were to explore health care staff's experiences of delayed transfer of critically ill patients from an EC; and to determine health care staff concerns about critically ill patients in the health care facility as well as obtain recommendations from health care staff on caring for critically ill patients in the EC.

3.3 STUDY SETTING

The study setting is described by LoBiondo-Wood and Harber (2017:93) as the place where the participants are recruited and data is collected. In this research study, data was collected from participants in the EC of a regional hospital in the Western Cape, SA. The hospital is situated in a semi-rural area 60km away from Cape Town. It is a 311-bed hospital with a 20-bed EC. This establishment is the only public hospital that renders fulltime emergency services to the population of three towns. The hospital covers an area of 22 500km². There is a high care 8-bed unit but only two are in operation. One of the senior physicians is the custodian to this unit and will determine who will be granted a bed or not. If the critically ill patient cannot be

accommodated in this unit, patients are kept in the EC overnight area. This EC area has a 16-bed capacity but accommodates on average twenty to thirty patients. This includes the critically ill patient and emergency patients in the centre. Critically ill patients stay in this overnight area until they can be transferred to the tertiary hospital in Cape Town longer than the six hours. Transfer will only happen if the tertiary hospital can accommodate the patient and if the patient qualifies according to certain criteria for critically ill management.

3.4 RESEARCH DESIGN

Research design is defined by Grove et al. (2014:45) “as the outline of the research study to ensure validity and control”. LoBiondo-Wood and Haber (2017:92) describe a research design as a description of how the researcher plans to answer the research question. A descriptive qualitative design was used for this study.

3.5 POPULATION

Population, as described by LoBiondo-Wood and Haber (2014:232), is a well-defined set of people that has specified properties. Grove et al. (2014:250) define a population as a particular group of people in whom the researcher shows an interest and obtains research results. In this research study, the population consisted of registered nurses from the EC, medical staff, and management of the EC as well the senior hospital managers. The rationale for the participants in diverse spaces was to get views from the different levels within the organisation. No minimum level of work experience was required. The researcher took participants who showed their willingness to participate. The research commenced during the period 30 June 2017 until 30 July 2017. A breakdown of the study population is presented in Table 3.1.

Table 3.1: Individual interviews with participants

Individual Interviews	Total (n=10)
Senior hospital management	2
Medical staff	4
Registered nurses	4

3.6 Sampling

Grove et al. (2014:249) define sampling as the process of selecting a portion of the research population to participate in the study. They also mention that researchers select participants who can contribute to the research with regard to knowledge, experience, and willingness to share information. LoBiondo-Wood and Haber (2014:65) describe sampling “as a process of selecting individuals, objects or events to represent the population of the study”. Furthermore, they state that the ideal sampling strategy should represent the target population and control bias as much as possible to ensure the validity of the research.

Purposive sampling was used for this study. Grove et al. (2014:270) describe purposive sampling as consciously selecting participants to participate in the study. The research problem has not been explored previously and, according to Grove et al. (2014:270), purposive sampling is the best way to gain insight into a new area of study. LoBiondo-Wood and Haber (2014:90) propose that in purposive sampling the researcher looks for a particular kind of person who can illuminate the phenomenon they want to study. All registered nurses, medical staff and management of the EC as well senior hospital managers during the study period were invited to take part in the study. An invitation was also extended to senior managers of the hospital.

3.7 Inclusion criteria

Inclusion criteria specify the characteristics the population must meet to be included in the study (Grove et al., 2014:251). Inclusion criteria is defined by LoBiondo-Wood and Haber (2013:233) as the control’s extraneous variability that might limit the

strength of evidence. As discussed in chapter 1, registered nurses, medical staff, and management of the EC as well as senior hospital managers were part of the inclusion criteria.

3.8 INTERVIEW GUIDE

Interviews as described by Grove et al., (2014:302) is the verbal communication between the researcher and the participant. The authors further state that the goal of the researcher is to obtain an authentic insight into the participant's experience. Data was collected using a self-developed semi-structured interview guide (see Appendix 4). The researcher was assisted by her supervisor when drafting the questionnaire guide. An open question was drafted to engage participants so that they could be comfortable and participate freely in conversation with the researcher. LoBiondo-Wood and Harber (2013:280) state that open-ended questions are used when the researcher wants the participants to respond in their own words. One main question was asked as an opening statement: "Describe your experiences about delayed transfer of critically ill patients from the EC." The interviews were intended to get an insight into participants' experiences of delayed transfer of critically ill patients from the EC in the Western Cape, SA.

Probing was also used during the interviews in order to gain in-depth data from participants regarding their perspectives on the research question. LoBiondo-Wood and Harber (2014:92) describe probing as additional questions that the researcher finds important. These questions are usually derived from the literature. Further probe questions were used throughout the interviews. These questions included: "How do you experience quality care (1), staff workload (2), and morale (3) in the emergency centre?"

3.9 PILOT INTERVIEW

Grove et al. (2014:45) define a pilot interview as a smaller design of the study conducted before the formal study. Furthermore, they note that a pilot interview is frequently conducted to refine the interviewing process.

LoBiondo-Wood and Haber (2014:90) further note that a pilot interview assists the researcher in determining if the planning of the study was reasonable. The reason for the pilot interview was to determine any problems that might hamper the interview

process going forward. Additionally, it also assisted in the preparation of the researcher for her interviews with the staff of the EC. The researcher received training at Stellenbosch University with regard to interviewing skills in March 2017. Informed consent was obtained and the interview was digitally recorded. The pilot interview was done by the researcher at the EC of the regional hospital. The findings of the pilot interview were included in the main study.

3.10 TRUSTWORTHINESS

Hall and Roussel (2017:39) state that trustworthiness is the central concept to appraise the rigour of qualitative research. The following aspects were thus applied in this study to ensure rigour: credibility, transferability, dependability, and confirmability as proposed by Guba and Lincoln (1985:316-323) and are described below.

3.10.1 Credibility

Hall and Roussel (2017:39) states that credibility is the assurance of data truth and the analysis of the data. Furthermore, the researcher should conduct the study in a manner that increases the confidence in the findings. The following credibility strategy, as proposed by Guba and Lincoln (1985), was applied. Member checking with one participant was done to further enhanced credibility. Due to staff shortages, resistance of management to the study, and the acute setting not all participants could participate. The researcher did reflection after listening to the digital recordings numerous times and also made use of field notes after each interview. The academic supervisor also audited the transcripts and evaluated the data to support the researcher. The researcher clarified and summarised what the participants had said during the interviews to ensure credibility.

3.10.2 Transferability

Hall and Roussel (2017:39) state that transferability relates to the research findings being applied to other locations or people. The researcher should offer adequate data to evaluate the applicability in other settings. Anney (2015:278) notes that transferability is facilitated by the use of purposeful sampling. The participants in this research study are knowledgeable about the research question. In this study, the researcher is of the opinion that EC based readers can identify with the research

content on health care staff experiences about delayed transfer of critically ill patients from an EC in the Western Cape, SA. The researcher provided a thick description of the research question and participants were selected purposively. It is the readers' decision to make if the result presented in this study can possibly be transferable to similar contexts.

3.10.3 Dependability

Dependability, as described by Hall and Roussel (2017:39), is the reliability of data through time and circumstances. Anney (2015:278) states that an audit trail establishes dependability in research studies. The academic supervisor reviewed recordings, transcripts, and field notes. For this study, the academic supervisor audited data collection and analysis.

3.10.4 Confirmability

Hall and Roussel (2017:39) describe confirmability as the data representing the information the participants described. Digital recordings were listened to numerous times and the researcher made reflective notes after each interview. Discussions were held with the academic supervisor to ensure that the data collected by the researcher was an accurate account of the interviews held. Confirmability according to Anney (2015:279) is when data and interpretations are only derived from the data. This process took place between the researcher and her supervisor to ensure confirmability. Quotations from the interviews enhanced confirmability. This will be presented in chapter 4.

3.11 DATA COLLECTION

Grove et al. (2014:47) note that data collection is the gathering of information applicable to the research purpose. LoBiondo-Wood and Haber (2013:285) holds that data collection represents a snapshot of how the study was conducted. In order to do the research, the researcher wrote a letter to the senior hospital manager to inform him about the intended study, after ethical clearance was obtained. Additionally, the researcher made an appointment with the Acting Nursing Service Manager to inform her about the research and method of data collection. This was done to obtain their consent and make organisational arrangements with the participants.

Some managers showed their unwillingness to accommodate the researcher, expressed concerns about the method of data collection, and indicated that they were not comfortable with the study being done at their regional hospital. A meeting was held with the executive managers where they stipulated the rules of the interviews to the researcher. The data collection took place over a one-month period from 26 June 2017 to 30 July 2017. The researcher visited the EC and explained the research topic and the objectives to one health care staff member on day-duty. This health care staff member was interviewed after consent was obtained. Additionally, she informed her colleagues who then made contact with the researcher showing their willingness to participate. Those who agreed to participate received a consent form and arrangements were made to do their interviews at a off day that was convenient for them. The reason for this was so that it did not interfere with their duties in the EC and hinder service delivery to patients.

Interviews were done with the health care staff at a time and place of their own convenience. Interviews were conducted in Afrikaans by the researcher who is fluent in Afrikaans and English. Digital recordings were made during the interviews to allow the researcher to give full attention to the participants during the interviews. Field notes were made only after each interview, which assisted the researcher in making connections and mapping out ideas and themes. The field notes thus played an important part during data engagement and data interpretation (Grove et al., 2014:86). The researcher made a journal to reflect on the experiences with the research study (Lamb, 2013:84).

3.11.1 Data collection: Registered nurses

The researcher carried out individual interviews with the registered nurses. One interview was conducted in the office of the registered nurse at a scheduled appointment. The other interviews were held at an arranged venue, convenient to the participants, outside of the hospital. This was to ensure that no pressure was placed on the participants due to management's views of the research at their institution. Some management showed their unwillingness to accommodate this research. All the registered nurses in the EC showed their willingness to participate. The interviews were done on their off days and were conducted over a period of two weeks.

To maintain confidentiality, participants' information was not mentioned and captured during the recordings of interviews. Numbering was used to ensure privacy and code all participants. The research objectives were explained on the consent document before written informed consent was obtained. The researcher started with an opening question of how participants "experience delayed transfer of critically ill patients from the emergency centre".

3.11.2 Data collection: Medical management

The researcher carried out individual interviews with the applicable medical management of the regional hospital. Management interviews were held in their offices on appointment.

3.12 DATA ANALYSIS

Data analysis, according to Grove et al. (2014:88) requires deep thought, discipline, and creativity. A professional transcriber transcribed the digital recordings verbatim. Digital recordings were clearly identified and stored on an electronic data storage device. The researcher then read over the transcriptions while listening to the recordings to ensure accuracy of the transcripts, complete missing data, and remove any identifying information. Digital recordings were password protected on computer and hard copies kept in a safe in the researcher's home. This was done to ensure confidentiality.

The qualitative data analysis process then followed. Grove et al. (2014:89) state that the researcher should spend a lot of time studying the data. The researcher read and re-read the transcripts to become intimately familiar with the data. Additionally, notes were made to organise the data. Concepts were identified and highlighted to identify relationships within the data. The academic supervisor assisted and guided the researcher with concepts and linking the findings of the data.

Creswell's (2014:196-200) coding process assisted the researcher to manage the collected data. Furthermore, coding assists the researcher to organise, prepare, read, and code the data, and to identify themes, obtain the results, and interpret the findings. Theron (2015:4) argues that coding is a method to organise data so that the messages of the research may become clear. Furthermore, coding is a design to capture the essence of the data. During this research, some codes appeared

repeatedly and, with regular consultation between the researcher and her supervisor, themes and sub-themes were identified from the data. Thematic content analysis, according to Clarke and Braun (2013:2), identify patterns in qualitative research. Furthermore, it is applied in methods to uncover people's experiences or understanding of a situation.

The researcher constructed the themes relevant to the research question. Reflections on the relationship between the themes were done to evaluate the link between the research question and data. Grove et al. (2014:69) state that researchers must set aside their own perception or understanding of results. The researcher applied this principle by reading the transcript, identifying the themes, and discussing the findings about what the participants revealed within the context of existing literature.

3.13 ETHICAL CONSIDERATIONS

The proposal for this research was submitted to the Stellenbosch University Health Research Ethics Committee for ethical approval. Ethical approval was obtained in May 2017 after the March 2017 modifications were accepted by the ethics committee (Appendix 1). Once ethical approval was obtained, the research proposal was submitted online to the Western Cape Department of Health (DoH) to carry out the research at the regional hospital's EC (Appendices 2A and 2B).

The ethical security of the researcher to protect the participant's human rights was upheld during this research study. Their right to self-determination, anonymity and confidentiality, informed consent, and safeguarding participants from discomfort and harm was adhered to (LoBiondo-Wood & Haber, 2013:258). Their right to self-determination was upheld as the participants voluntarily decided to participate. Anonymous numbering of participants' records and obtaining written informed consent assured the right to anonymity and confidentiality. The participants were explained the objective of the research and no coercion took place.

Research participants were informed of the use of a digital recorder during the interviews. Additionally, participants were informed that they could withdraw at any time during the interview and research without any consequences. No participants withdrew from the study. Research participants' data is locked and stored in a secure

safe at the home of the researcher. The researcher made a cell phone available with airtime for them to make a call to the Independent Counselling and Advisory Services. This was done to assist participants should the need arise for emotional support. Refreshments were served.

3.14 LIMITATIONS

Limitations of the study include that the study was conducted at one hospital's EC only. Generalisations cannot be made, as the data collected is not illustrative of all ECs in SA. However, similar settings may find the recommendations useful.

3.15 SUMMARY

Chapter 3 described the methodology used in this research study, including the research design, study population as well as the pilot interview. The process of data collection and data analysis was described. The research design was a descriptive qualitative design used to explore health care staff experiences about delayed transfer of critically ill patients from an EC in the Western Cape, SA. In the following chapter, the findings of the study are presented and discussed.

CHAPTER 4

FINDINGS

4.1 INTRODUCTION

This chapter outlines the analysis and interprets the data that was collected on health care staff experiences of delayed transfer of critically ill patients from an emergency centre (EC) in the Western Cape, South Africa (SA). In chapter 3, the methodology was described.

4.2 BIOGRAPHICAL DATA

The study population included a total of ten (n=10) participants. A total of four (n=4) registered nurses from the EC were interviewed. In addition, a total of two (n=2) senior hospital management members and four (n=4) medical staff members were interviewed. The participants' years of experience in this health care facility ranged from 6-25 years. The participants were all considered to be experienced in the research question with each contributing valuable data on their experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA. The interviews were in Afrikaans, which is the local language of the majority of the participants. The researcher is proficient in both Afrikaans and English. In SA, the term 'sister' refers to a professional nurse.

4.3 THEMES EMERGING FROM THE INTERVIEWS

The systems theory (1972) was used to organise and present the findings of this research study. The relationship between the components of the system theory and the themes is emphasised as a department that needs to work together. The various themes were broken into sub-themes and discussed under each component. The system theory provides a critical perspective to understand health care staff experiences about the delay transfer of critically ill patients from the EC. Feedback from the participants was also obtained.

The four (4) main themes and sub-themes that came to light during the interviews will be discussed next (see Figure 4.1). To describe these themes and sub-themes, the analogy of an engine was used. This analogy was the researchers own. It

seemed the best way to the researcher to visualise the workings of the EC, as each component is of critical importance to create motion as an engine does. The information gathered from the participants demonstrates the progression of a situation where resource limitations influence staff performance and waiting times. This was experienced as compromising care of the critically ill patient in the EC and increasing the potential for medico-legal risks.

The first theme that emerged was *Resources Engine* where the limited resources negatively impacted the environment of the critically ill patient. These resources included clinical staff shortages, financial constraints, lack of supporting staff, and equipment shortages.

The second theme, called *Staff Engine*, emerged from the effect resources have on the health care professionals working with the critically ill patient in the EC. Access to training, ethical and moral dilemmas, the impact of management style, and the emotional burden staff experience will be discussed.

The third theme, called *Critical Care Patient Engine*, focuses on the management of the critically ill patient in an undedicated unit and is at the centre of this study. Potential quality of care and exposure to risks will be discussed.

The fourth theme, called *Emergency Centre Engine*, emerged from the management of critically ill patients in the EC. Longer waiting times, bed management, and the referral system will be discussed.

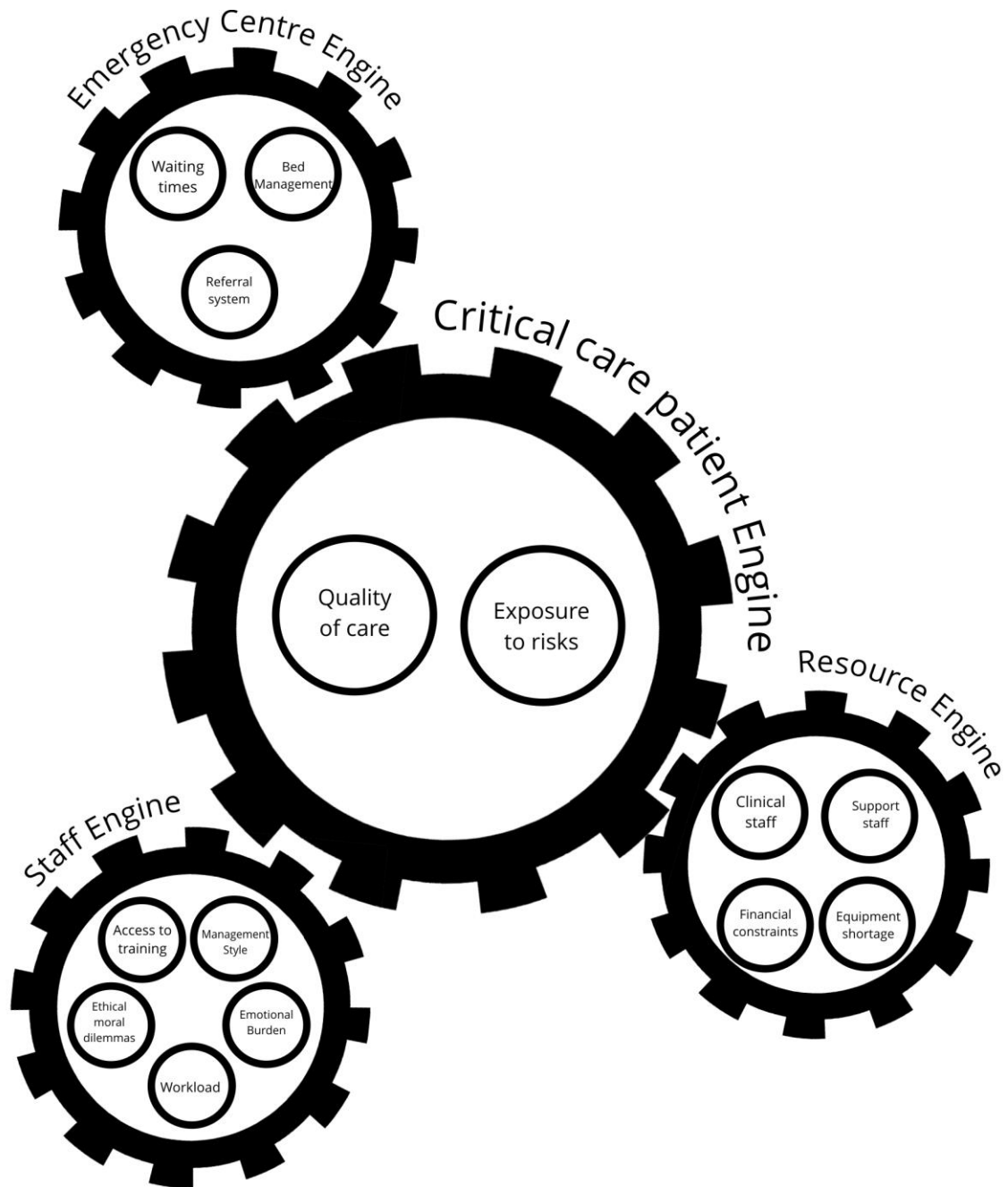


Figure 4.1: Four main themes depicted as per the researcher's analogy of an engine

4.3.1 Theme 1: Resource engine

Health care resources are important to ensure safe patient care. Sufficient resources ensure positive patient outcomes. Health care professionals were concerned about the limited resources for critically ill patients in their secondary level hospital.

4.3.1.1 Sub-theme: Clinical staff shortages

Concerns from health care professionals was about the minimum of registered nurses and bed availability to transfer to an Intensive Care Unit (ICU) from the EC.

“There is only one sister allocated to the resuscitation area. On night duty there are only 3 sisters for the whole emergency centre.” (Participant 7)

“We have a 8-bed high care unit but only 2 are commissioned due to staff.” (Participant 9)

“We are the third busiest hospital in the Western Cape and yet we function with minimal amount of staff.” (Participant 4)

4.3.1.2 Sub-theme: Supporting staff

All participants raised the issue of the lack of supporting staff and that nurses end up doing non-nursing activities.

“The sisters (professional nurse) perform porter function, clean the linen, and do basic nursing care. This is not her scope of practice.” (Participant1)

“If we really want to address critically ill patients, we need a twenty-four hour radiological service.” (Participant 4)

4.3.1.3 Sub-theme: Financial constraints

Managers expressed that there is a lot of pressure on them to cut expenses. Specialised care is expensive and they do not foresee a change with the current economy in the next few years. Only two of the eight high care beds available were open.

“We planned for a 8 bed high care unit. Eight years down the line and we are still struggling.” (Participant 2)

“To be honest, we have to cut costs.” (Participant 9)

Professional nurses expressed their misgivings about the budget restraints. During this research, there were two vacant registered nurse positions in the EC that were not filled due to financial constraints.

“They promise they’re going to look at staff appointment but there is no money.” (Participant 5)

“Because high care costs so much the funding has been lost. So we got this white elephants with capacity to run a high care but we got no personnel to run an high care.” (Participant 4)

“When we motivate for more staff they tell you staff cost are the biggest expense.” (Participant 7)

4.3.1.4 Sub-theme: Equipment shortage

Health care professionals comment on the lack of appropriate equipment to accommodate critically ill patients in the EC.

“You tend to offer the patients who require more intense management a sub service because you don’t have cardiac monitors available.” (Participant 4)

“There is no equipment like ventilators available to accommodate those patients.” (Participant 7)

4.3.2 Theme 2: Staff engine

4.3.2.1 Sub-theme: Access to training

Continuous development was a factor that influenced staff. In-service training was given in previous years and there is no time for training due to the workload. Compulsory development courses are only focused on trauma and not critically ill patients.

“We can’t send the staff for training because service delivery comes first. We don’t have the capacity.” (Participant 1)

“I would really like to do Advance Cardiac Life Support, but I (professional nurse) have to pay for it.” (Participant 7)

4.3.2.2 Sub-theme: Management style

A factor influencing staff morale negatively was managers’ behaviour perceived as victimization towards nurses in the EC.

“Management target you if you voice your opinion about something.”
(Participant 5)

“Management clearly let’s you know not to undermine their authority. We are not allowed to make any suggestions to improve service delivery. What they say is the law.” **(Participant 8)**

“Management is rude towards staff and that in front of your colleagues.”
(Participant 7)

Staff feels the management of complaints lead to conflict among health care professionals and there was resistance to change.

“The managers do not investigate complaints. They don’t look at what was contributing factors leading to the complaint. They just accused the staff and they are aware of the conditions we work in.” **(Participant 8)**

“There are leaders with many years of experience who are not willing to adapt.” **(Participant 3)**

Another concern from the participants was the hierarchy in the EC. Medical managers have more authority in the nursing planning than the nursing managers have themselves.

“The medical managers interfere with the nursing issues. They decide who will work where and who will go for training.” **(Participant 6)**

Staff work under pressure with little support from the management and endure chastisement.

“Management knows the conditions we work in. We had various meetings but it’s useless. If we complain, they tell you to phone Independent Counselling Advisory Service and that’s it.” **(Participant 8)**

“If you don’t perform, they will reprimand you.” **(Participant 5)**

A lack of professionalism was another factor affecting staff. Nursing staff feel that the lines between their professional roles become distorted.

“Medical and nursing staff are familiar, so you can’t held someone accountable if something is wrong.” (Participant 7)

4.3.2.3 Sub-theme: Ethical and moral dilemmas

Ethical issues were strongly shown to influence health care professional functionality. Health care professionals are put in situations where they are in conflict with their ethical values. Ethical decisions need to be made with regard to the critically ill patient in the EC.

“All the patients are acute and you have to decide which one will first be managed. We know what can happen and that’s what bothering me.” (Participant 8)

“I have worked in situations where I had to make decisions with regard to which ventilated patient I will attend to. My opinion is that the critically ill patient does not get effective critical care management” (Participant 5)

“You are pushed in a situation where you have to decide: who will benefit from the high care bed more? Who needs more attention?” (Participant 4)

Health care professionals felt they have to advocate for patient rights in the EC. This was evident in the following excerpts:

“You have to be alert and tell the junior doctor that the patient condition is deteriorating.” (Participant 5)

“According the Constitution of South Africa, everybody has the right to emergency care. It’s about the critically ill patient and that is a critical element in our Constitution.” (Participant 9)

4.3.2.4 Sub-theme: Emotional burden of staff

A concern from the health care professionals was the fact that they are not appreciated.

“Management never say thank you. We are not appreciated.” (Participant 8)

“We don’t expect money, just a thank you for you hard work.” (Participant 5)

Staff feel guilty and that they are not in control.

“If a patient has a chance to live, we can’t pull out the endotracheal tube and say let nature take its course, we can’t do that.” (Participant 7)

“Our critically ill patients don’t get the care they deserve. We feel guilty, we try, but we can’t give them the care.” (Participant 5)

Staffs looking after the critically ill patients often feel alone with no support.

“I don’t know how the sister (professional nurse) gets through the night, when work is not done. I tell them its fine. I have empathy for their situation.” (Participant 5)

“When I (professional nurse) ask for help and I don’t get it and I’m in trouble for something I didn’t do, I will use the excuse that I did ask help.” (Participant 8)

Health care professionals expressed the need for the institution to protect them. Professional nurses feel they are exposed to more than they can handle, which exposes them to risks.

“At the end of the day, there is no protection for you as a professional nurse.” (Participant 8)

The load of critically ill patients in the EC affects the staff members’ emotional state.

“You feel depressed, all because of the load of critically ill patients.” (Participant 5)

Principles of fairness with regard to staff allocations were strongly discussed by participants. The high care unit bed occupancy is set according to staff availability. A gatekeeper decides who will be accommodated in the unit and a third bed will only be opened if a registered nurse is available. The EC staff said that they do not have a voice when it comes to the load of critically ill patients they have to manage. Critically ill patients going through the resuscitation unit range from four to six per day and that is with one professional nurse.

“We don’t have the luxury to refuse, all because we are casualty. They (management) expect us to cope and that’s unfair.” (Participant 8)

A factor contributing to staff morale is the workload in the EC. Participants voiced their concern with regard to their physical and emotional wellness.

“I don’t sleep well at night. The nurses are too long exposed to this high acuity of work.” (Participant 9)

“The nurses are physically drained. They can only do so much; one person can only do so much and one person can only take so much responsibilities.” (Participant 4)

“The nurses get tired, sick, and they’re burnt out.” (Participant 1)

4.3.2.5 Sub-theme: Workload

The daily planning is influenced by workload, human resources and acuity. Staff cannot cope with the load and delegated patients are left unattended while the registered nurse performs functions of the supporting staff. Numerous meetings were held with management but no improvements have been made and the voice of nurses does not seem to have been heard.

“The nursing staff job description change constantly due to lack of resources.” (Participant 5)

“We have a high workload, tertiary level critical care and there is just a shortage.” (Participant 9)

“The registered nurse has to do the work of the enrolled nurse and the auxiliary nurse.” (Participant 6)

“If you work in the resuscitation area you need to release the sister (professional nurse) in the nebulisation suite for lunch and tea, so we look after 2 areas in the emergency centre” (Participant 3)

“A resuscitation chart was developed for the critically ill patient but the nursing staff don’t have the time to fill it in.” (Participant 1)

Nurse ratio and workload in the high care unit and the EC differ but both disciplines are looking after the critically ill patient.

“Our ratio differs from the high care unit. We are one on four and high care one on one critically ill patients.” (Participant 8)

“The emergency centre ratio is one on anything. This is not right because it affects quality care.” (Participant 1)

Ward patients who became unstable are transferred to the EC for stabilisation and possible transfer to the high care if a bed is available or the tertiary hospital. This directly puts more pressure on the already overloaded EC.

“Unstable ward patients are transferred to the EC to get intubated. That patient becomes part of our workload; no staff are sent from the ward to help us.” (Participant 5)

4.3.3 Theme 3: Critical care patient engine

It emerged from the interviews that the critically ill patient is compromised because of delayed transfer from the EC. These were some of the comments:

“Those patients that are left in resuscitation often don’t get good nursing care because there isn’t enough sisters to dedicate someone hourly to check on the observations or stuff.” (Participant 4)

“The biggest problem is you worry about stuff being missed. You are extremely busy getting your antibiotics in time, making sure your inotropes are running, making sure the patient is sedated properly and monitored.” (Participant 2)

“A full wash is a luxury. Ventilated patients need full wash, mouth care, and other stuff to prevent complications from occurring. I can’t deliver that.” (Participant 8)

“We transfer unstable patients to accommodate new patients and all of this is done with one sister (professional nurse).” (Participant 1)

“The patient is not properly cared for whilst on the ventilator and condition deteriorates. That patient is critically ill and is entitled to one on one nursing care.” (Participant 9)

4.3.3.1 Sub-theme: Quality of care

Participants indicated that the lack of quality of care to the critically ill patient in the EC affected the patient adversely. This directly relates to the nurse workload, acuity, and ineffective use of emergency facility.

“The question is: can you deliver quality nursing care if one sister (professional nurse) looks after four critically ill patients that are ventilated.”
(Participant 7)

Managers expressed their concerns with regard to the quality of care.

“It’s a mess. Those patients needs to be transferred out of the resuscitation to the high care unit.” **(Participant 9)**

“You have one sister (professional nurse) looking after four patients. Inherently something is going to give.” **(Participant 4)**

“I think a lot of times we do land up possibly not giving the maximal benefit of the doubt.” **(Participant 2)**

Concerns with regard to the number of critically ill patients in the EC were expressed.

“You are not focused when you have to care for more than two critically ill patients. The care is hopeless.” **(Participant 8)**

“Critically ill patients’ observations are not done, intravenous medication not administered, and urine output not charted.” **(Participant 10)**

“Sometimes we don’t have a bed to resuscitate a patient because the resuscitation beds are full with the critically ill patients. Then we resuscitate the patient on the floor.” **(Participant 9)**

4.3.3.2 Sub-theme: Risk management

It emerged from the interviews that the critically ill patient in the EC was often exposed to risks.

“Patient is negatively affected because he doesn’t get the critical care. It leads to complications that could’ve been prevented.” (Participant 8)

Lack of staff for the critically ill patient leads to staff not responding to cardiac monitors in the EC. The professional nurse working in the resuscitation unit leaves the other critically ill patients unattended when transporting ventilated patients to the scan department.

“The sister (professional nurse) must accompany ventilated patients to the scan.” (Participant 5)

“We often even get time to do observations and when we do, we struggle to respond to it.” (Participant 1)

“Alarms often go off and I (professional nurse) can’t respond to it. I just hope it’s not an urgent alarm and “pray” for the patient to be okay.” (Participant 8)

It emerged from the interviews that the documentation of the critically ill patient is not always done according the SANC because of time constraints in the EC.

“Nursing documentation is affected the most. You (professional nurse) don’t write the ventilator settings, changes that was made or if the new settings improve the patient.” (Participant 8)

4.3.4. Theme 4: Emergency centre engine

4.3.4.1 Sub-theme: Waiting time

Health care professionals caring for the critically ill patients in the EC commented on the long waiting time. The management of critically ill patients takes time away from other EC patients.

“When we look after two or three critically ill patients it results in waiting time increases in the EC.” (Participant 8)

“You have to look after your critically ill patient and the rest of the patients have to wait.” (Participant 5)

Concerns about the turnaround time for the critically ill patient in the EC were expressed. Continuous planning was necessary by clinical and managing staff to

ensure available resuscitation beds for the new critically ill admissions. These patients blocked the resuscitation unit for up to twenty-four hours. Doctors delay transfer of critically ill patients if the EC is quiet, which contributes to the long waiting times.

“The doctors tell you to wait if there is only three critically ill patients. The EC is still quiet and the patient can be re-evaluated.” (Participant 5)

It emerged from the data that adamant family put pressure on the health care professionals and that they are exposed to verbal abuse.

“The care of orange and red patients is delayed due to lower level triage patients that are first attended to due to families that is rude to staff.” (Participant 7)

4.3.4.2 Sub-theme: Referral system

All specialist referrals from outlying hospitals are sent to the EC until the specialist comes to see his/her patient.

“Sometimes there are five EC patients and ten patients from other disciplines. Although our patients are only five we have to do the care and doctor orders for fifteen patients from different disciplines.” (Participant 8)

A staff member also raised her concern that due to unforeseen circumstances at a nearby District hospital, the referrals of ventilated patients have increased.

“The load just get bigger, they don’t have an emergency centre which results in those patients coming to us.” (Participant 5)

4.3.4.3 Bed management

Discharge patient in the general wards are not sent to the discharge lounge at ward level. Furthermore, “bed bookings protocol” is not followed by the general wards, which results in the emergency patients delay of transfer.

“Lack of communication between doctor and ward staff results in patients not getting transferred from the EC in an appropriate timeframe.” (Participant 6)

4.3.5 Thematic summary

Below is a summary of themes and subthemes for health care staff experiences of delayed transfer of critically ill patients from an emergency centre as aligned to study objectives.

Theme 1	Resource Engine
Objective	To describe health care staff experiences of delayed transfer of critically ill patients from the emergency centre.
Sub-theme	Clinical staff shortage, support staff, financial constraints and equipment shortage.
Theme 2	Staff Engine
Objective	To determine the effect of caring for the critically ill patient in the EC has on the health care staff.
Sub-theme	Access to training, management style, ethical and moral dilemmas, emotional burden and workload.
Theme 3	Critical Care Patient Engine
Objective	To determine health care professionals' concern about quality care.
Sub-theme	Quality of care and risk management
Theme 4	Emergency Centre Engine
Objective	To determine the effect the management of the critically ill patient has on the EC.
Sub-theme	Waiting time, referral system and bed management

4.4 SUMMARY

The findings of this study found that delayed transfer of critically ill patients to a dedicated unit compromised the care of the patients at the EC of a regional hospital in the Western Cape, SA. The interviews further revealed that a shortage of specialised staff in critical care in the EC contributed to the high workload, morale issues, long waiting times, and quality of care concerns in the EC. In addition, lack of leadership and management support had a negative effect on staff performance and safety.

4.5 CONCLUSION

This chapter presented the findings of the experiences of health care staff about delayed transfer of critically ill patients from an EC in the Western Cape, SA. In chapter 5, the study findings will be discussed. Recommendations will be made.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

“The problem is with the system and the system belongs to management.”

W. Edwards Deming

5.1 INTRODUCTION

In chapter 1, the rationale and objectives of the study were provided while chapter 2 discussed the reviewed literature. In chapter 3, the research methodology was discussed and in chapter 4 the findings of this study were presented.

In this chapter the experience of health care staff about delayed transfer of critically ill patients from an emergency centre (EC) is discussed. The findings are discussed in relation to literature and recommendations are made.

5.2 DISCUSSION

The aim of the study was to explore the experiences of health care staff regarding delayed transfer of critically ill patients from an EC in the Western Cape, South Africa (SA). In this study, it was found that resource limitations negatively affect health care professionals' ability to care optimally for the critically ill patient in the EC. Quality care and risk management are factors that need to be considered when caring for the critically ill patient. In addition, low morale, ethical issues, and autocratic leadership contributed to discord amongst health care staff. Lastly, waiting times for patients entering the EC is also affected. The identified objectives of this study were to:

- Explore health care staff experiences of delayed transfer of critically ill patients from an EC in the Western Cape, SA.
- Describe health care staff concerns about critically ill patients in the EC.
- Obtain recommendations from health care staff on caring for the critically ill patients in the EC.

Each of these objectives will be discussed in this chapter. The EC was viewed as an open system of the regional hospital as illustrated in Figure 2.1. The system theory assisted the researcher to frame the input, processes, and output themes for the discussion. Feedback was also included as the suggestions made by participants, which can be communicated to the institution.

Table 5.1: Systems theory applied as framework to reflect the identified themes

	Impact of the critically ill patient on the EC
Input	Nurses' experience of delayed transfer of the critically ill patient from the EC
Process	Nurses' experience of the management of the critically patient in the emergency centre
Output	Impact of delayed transfer on quality care
Feedback	Strategies to better deal with the critically ill patient in the EC

5.2.1 Objective 1: Obtain health care staff experiences of delayed transfer of critically ill patients from the emergency centre

5.2.1.1 Input: discussion on resource engine

Shortages of critical care skill nurses in SA has a direct impact on the availability of critical care beds (Section27, 2013:1). Staff shortages were highlighted in the feedback from all participants as it contributes significantly to the experience of health care staff about delayed transfer of critically ill patients from the EC. In SA, there have been several media reports about the nursing crisis with regard to the shortage of nurses (Pieterse, 2016). The shortage of nursing needs to be addressed before National Health Insurance (NHI) can be implemented (Pieterse, 2016). The Democratic Nursing Organisation of South Africa (DENOSA) states that the shortages of nurses results in poor service delivery (Independent Online, 2017). The interviewees mirrored this sentiment. The shortage of skilled intensive care nurses in South African public hospitals was emphasised by eNews (Cullinan, 2015:1). Only half of the professional nurses in SA and who are registered with the SANC work in the public sector.

In order for health care professionals to deliver safe and efficient care, they need equipment. This relates directly to the environment of the critically ill patients where health care professionals rely on the life support equipment to ensure a positive outcome. Health care professionals experience a shortage of equipment to manage the critically ill patient.

The budget was another factor voiced by participants as an input constraint on the resources that drive the EC resource engine. Participants experience this factor as frustrating and feel helpless. The overall feeling was that there is no improvement from the Department of Health (DoH) for the resources-constrained conditions in which they have to work. Pieterse (2017) reported that health care professionals in KwaZulu-Natal were aggrieved with regard to the lack of resources and budget cuts. The DoH in KwaZulu-Natal has a one-billion Rand shortfall for their 2017/18 budgets. Many provinces in SA confirm the budget constraints. The Western Cape only fills the critical posts in line with the budget (Gonzalez, 2016). National Health Minister, Dr Matsoaledi commented on moratoria in the health sector by stressing that appointments are not limited to medical practitioners.

Cost cutting is due to shortfalls in health care professionals' salaries (Gonzalez, 2016). Business Tech (What nurses, teachers and police officers earn, 2016) revealed that health care professionals', working in public hospitals, salary ranges from R150 000 to R1.82 million per professional (see Table 5.2).

Table 5.2: Health care professionals' salary (What nurses, teachers and police officers earn, 2016)

Job	Salary
All categories nurses	R150,000 - R350,000
Nurse managers	R500,000 - R750,000
Medical officers	R480,000 - R990,000
Medical managers	R850,000 upwards
Medical specialists	R1.33 million upwards

However, nursing professionals in this study relayed they were aware of the appointment of more doctors in the hospitals. Concerns, from their perspective, were that the greater current workload constraints lie within the nursing profession. The appointment of more nursing staff would cost the DoH less money and the patients could get better nursing care. The National Health budget for nursing had not been adjusted for two years (MoneyMarket, 2016:1) and put pressure on the health system. The radiology services compromise the management of patients in the EC, as their services are only available during "certain times". Patients who need urgent radiology at night would have to wait until the morning. The patients sit in the EC and are often uncomfortable and become dissatisfied with the service delivery. According to an article on the Gauteng DoH, the lack of radiology services can influence the diagnosis, treatment, and poor health outcomes (Section27, 2013:1).

The time health care professionals spend doing functions outside of their job descriptions was another factor that contributed to the resources engine. Nurses of the EC are often also the porter or the cleaner. This imposed on their time with the patient and often leads to their frustration. DENOSA encourages nursing staff to not

perform functions outside their scope of practice (Sekhotho, 2017). This was in relation with the shortage of support staff where nursing staff do activities of clerks, cleaners, and porters (Press Reader, 2017). Lala, Lala and Dangor (2017:64), in a study done in SA, revealed that nurses are burdened with the function of porters, cooks, and cleaners alongside their own heavy workload.

5.2.2 Objective 2: Describe health care staff concerns about critically ill patients in the emergency centre

5.2.2.1 Process: discussion on staff

Participants indicated areas of concerns, which they felt, if addressed appropriately, would make their current work environment more tolerable. An autocratic management style was experienced by staff and the yearning for leadership was visible. The EC is already under pressure and positional power in a hierarchical structure demotivates health care professionals. Health care staff described a leadership of limited support, feeling that they do not have a voice and that professional standards and professionalism were lacking. During the research, the health care professionals in the EC reported lodging a formal complaint through the labour process about the autocratic leadership style.

Booyens et al. (2015:194) advises health care professionals in managerial positions to apply the principles of managing people through reward as it improves job satisfaction and organisational success. Health care professionals voiced that they are dissatisfied with, stressed, and demotivated by their leaders. In a study by McHugh, Kutney-Lee, Cimiotti, Sloane and Aiken (2011:202), they noted that health care professionals become emotionally and physically burnt out when exposed to a working environment of stress. Maboko (2012:912) notes that certain South African hospital managers are still practicing autocratic leadership.

Health care professionals caring for the critically ill patient in the EC regularly faced with ethical issues. A unified voice from participants revealed that decision-making with regard to which patient to attend to first were a norm in the workplace. The ethical issues were caused by limited resources. As Stellenberg and Dorse (2014:1) noted, patient care and basic human rights are compromised due to budget cuts. Results from this study revealed that the level of care staff are able to render

influences staff morale. Due to the nurse-critically ill patient ratio in the EC, basic care could not be delivered to ventilated patients. Nurse Helene Donnelly blew the whistle on the Stafford Hospital in England (Stafford hospital, 2013) where patients' care was compromised. Staff at the Stafford Hospital did not feel able to report concerns. The participants from this study shared the same sentiment that they do not feel able to express their concerns.

Professional nurses often referred to the "Nursing Pledge" where they were confronted with their own values. The SANC (2017a) expects their members to uphold the oath with regard to humanity. Nurses reported that, because they were not able to uphold hygiene due to limited staff and time, they became despondent. This contributed to low morale in the EC. The SANC (2017b) acknowledges that nurses have the right to an environment where safe patient care can be delivered and to be equipped with the necessary resources. This right is further echoed by the Constitution of the Republic South Africa, Act No. 106 of 1996, where patients' lives are not compromised (South Africa, 2017). Results from this study revealed that health care professionals did not feel they could advocate for their patients or colleagues in terms of managing the critically ill patient in the EC.

The findings of this study revealed that waiting times were influenced by the critically ill patient taking the limited resources away from the patients entering the triage system. It was evident that the system was overloaded and the health care professionals could not manage the waiting time effectively. The Western Cape DoH (2013:1) are currently trying to address the waiting times in the hospitals. Western Cape Minister of Health, Mr Theuns Botha, notes that the ECs in the Western Cape are under tremendous pressure, which results in complaints from patients (Western Cape Government, 2013:1). Health care professionals' views in this regard is that the delayed transfer of the critically ill patient places more pressure on them. Currently, staff are frustrated with the waiting time and the verbal abuse from patients and feel that the health system is failing them. Waiting time at this EC was previously researched and found that a shortage of staff and patient overload contributed to long waiting time (Hardine, 2017:3).

5.2.2.2 Output: discussion on critical care engine

Critically ill patients in the EC receive care that health care staff feel was not adequate. Shortage of staff, clinical competence, and staff ratio affected the patients negatively. Nursing participants were trained in emergency nursing but the majority only had experience when it came to the critically ill patient. This busy setting allows limited time for training and the registered nurses often do not have time to perform duties that contribute to the quality of care. Furthermore, the quality of care to the other EC's own patients was also affected due to the critically ill patients that stayed in the facility for an unreasonable length of time.

A study by Boyle et al. (2011:1) on EC crowding revealed that critically ill patients in the EC create pitfalls for new patients arriving by ambulance. Study participants shared this sentiment where they had to remove patients from trolleys and place them in chairs to accommodate new patients. Atakro, Ninnoni, Adatara, Gross and Agbavor (2016:1) note that critically ill patients' needs often cannot be provided for in a busy EC and health care professionals are obliged to divide their time between a bigger pool of patients. Emergency medicine specialist knowledge and skills are strengthening qualities in ECs, as noted by the Western Cape Government (2013) but participants often work with junior doctors over weekends, public holidays, and after hours. The clinical knowledge and experience of these doctors are not comparable to that of a specialist.

Varndell et al. (2015:3290) note that emergency staff are uncomfortable when managing critically ill patients. Participants relate with this view because they often have to leave the critically ill patients to attend to the new unstable patient coming into the EC. Quality care is influenced by patient load, shortage of staff, and poorly equipped health care facilities (Van Rensburg, 2014:4). The findings of this study revealed that health care professionals have to work in different sections in the EC and relieve the high care unit for lunch breaks when the need arises.

When nursing ratios differ between night and day shifts it affects quality (Lala et al., 2017:64). Participants shared this concern because health care staff working night duty are always less in numbers and find themselves in an unpredictable emergency environment.

Lala et al., (2017:64) further states that power dynamics between medical and nursing staff need calibration for nurses to have an important role in the circle of health care. The emergency nurses voiced their concern towards the management with regard to quality care. They often feel no improvements are made and that there is “no appreciation” shown towards nursing. They feel that there is a rift between management and the nursing staff working in the EC. A study done by Bell (2005:164) into the scope of practice of registered critical care nurses advise that nurses caring for the critically ill patients must be innovators of care and not followers of orders.

A study was done on Australian emergency nurses’ perception of sedation management practices for critically ill intubated patients (Australian Commission on Safety and Quality in Health Care, 2010:1). This indicated that the emergency nurses felt uneasy and anxious and that they requested support when managing the critically ill patient. Some participants in this study voiced their concern with regard to the management of critically ill patients in the EC. Health care staff trained in critical care often are anxious when a non-trained staff member manages critically ill patients. The lack of knowledge to interpret observations and follow-up care of the critically ill patients results in care being compromised.

Documentation is an important part of health care. Health care professionals are taught, “what is not written, is not done”. The primary purpose of nursing documentation, as cited by Alkouri, Alkhatib and Kawafhah (2016:102), are to reveal a legal, accurate account of what happens in order to assess the quality, efficiency, and effectiveness of patient care. Comprehensive critical nursing care documentation was not possible in this study when the patient was accommodated in the EC due to time constraints.

According to a formal complaint lodged by a concerned health care professional to the Gauteng DoH, critically ill ventilated patients’ care is compromised in undedicated units (Section27, 2013:1). This study showed that health care professionals find it impossible to respond to each and every ventilator and cardiac monitors’ alarms due to limited staff and workload. Furthermore, basic essential care, such as endotracheal suctioning and catheter care, are seldom done and put patients at risk for infections.

Booyens et al. (2015:237), advise health care professionals to be proactive in the prevention of risks. The participants stated that they found it challenging to minimise risks associated with the critically ill patients. Critically ill patients lie on trolleys for extended periods and pressure care is not optimal. Health care professionals caring for the critically ill patients are responsible for numerous tasks resulting in other critically ill patients being left unattended. This overlap of responsibilities results in the critical ill patient being exposed to potential risks such as pressure sores.

5.2.3 Objective 3: Obtain recommendations from health care staff on caring for the critically ill patients in the emergency centre

5.2.3.1 *Feedback strategies to improve the care of the critically ill patient in the emergency centre*

Feedback on health care is important to address limitations. The management of the critically ill patient in the EC is complex and can contribute to a chaotic environment. Therefore, feedback about the shortcomings can improve service delivery. Accommodating the critically ill patient in the EC is a daily reality and will not change soon. Most of the issues should be addressed at management level. Therefore, health care leaders should attend to the findings of this research to identify solutions, implement changes, and evaluate the effect on the system.

Most of the participants' feedback with regard to limited resources was the issue of human resources and the appointment of more staff. The appointment of more medical staff has a huge financial impact on hospitals. Nursing staff felt that there are almost more doctors on a shift and not sufficient nursing staff to do the work. A recommendation from the staff was to allocate the funding towards the appointment of registered nurses.

Staff expressed frustration towards management regarding their excessive workload, which is not addressed. The lack in communication and people skills were evident. Some participants had a mutual feelings about the difficulties of communicating with management with regard to their concerns. The lack of communication frustrated health care professionals and tended to lead to conflict in the workplace. Additional to the communication barrier was the manner that managers spoke to their staff. Nursing participants are often told what to do without them giving input. Nursing

participants in this study are unsatisfied with the lack of respect that is shown towards them.

Health care professionals are aware of the nursing shortage in SA. Addressing these factors could improve the ability of the staff to render care that they feel should be more adequate. Referral patients should be admitted directly to the applicable ward to alleviate the load on the EC. Adhere to the timeframe of 4 – 6 hours stay in the EC and weekly monitoring will ensure compliance.

Another proposal was made about the waiting time regarding the primary health care clinics that close at 16:00. Patients have no other facility to go to when in need of help. Therefore, they go to the EC, which results in more pressure on the EC and health care professionals. A 24-hour service in the district would alleviate the load on the EC. Therefore, health care professionals can prioritise their time to attend to the critically ill patient. This extension of clinic hours and service was requested formally by the facility from the health authorities but was not approved.

Health care professionals expressed that the existing EC workload and specialised care for the critically ill cannot be rendered in the EC with the limited resources. Managing critically ill patients in the EC with one registered nurse allocated to four critically ill patients, is deemed to result in life or death situations. Recommendations from health care professionals were the even distribution of critically ill patients between the EC and the high care unit. The limited critical care resources in terms of open high care beds in secondary hospitals is not deemed sufficient. Most secondary hospitals have been equipped with the facilities to function as a critical care unit but, because of funding constraints, it has been not materialised. The infrastructure is there but not sufficient staff to run the high care unit.

5.2.4 Summary table of system theory and findings

System theory	STAFF ENGINE	RESOURCE ENGINE	EMERGENCY CENTRE ENGINE	CRITICALLY ILL PATIENT ENGINE
Input	Training Management style	Clinical and supportive staff Budget	Clinical staff	Clinical staff
Process	Autocratic management style Ethical and moral burden	Budget	Waiting time	Compromised patient nurse ratio
Output	Burnout Vulnerable Guilt Depressed	Patient ratio equipment	Complaints	Quality care Risks
Feedback	Policy: National core standards of 2011 in guiding, monitoring and enforcing health care safety and quality standards.			

5.3 RECOMMENDATIONS

This study demonstrated that critically ill patients are compromised when cared for in an EC. The following recommendations are made based on the findings of this study:

- Organisational leaders strategic plan needs to identify and address processes that aggravate the problem of delayed transfer of critically ill patients from the EC.
- Human resource limitation strategies need to be implemented, monitored and evaluated. This includes nurse to critically ill patient ratio, optimal use of current high care beds, recruitment of nursing staff, finance and increasing equipment.

- The placement of an additional registered nurse in the resuscitation unit to alleviate pressure and ensure optimal care is strongly recommended.
- A system for referral patients, where direct admissions go directly to the discipline and not through the EC, need to be implemented. This will reduce load on the health care staff in the EC.
- Extension of clinic hours and service need to be put on the agenda as pipeline strategy.
- Health care professionals should ensure patient-centred care through principles and access to training. The registered nurses should be given the opportunity to attend Advanced Cardiac Life Support courses every second year. This, along with their trauma training, would give them insight into the critically ill patient.
- Leadership programmes should be provided for managers to enhance their managerial skills and abilities.
- Theoretical and practical workshops on leadership style, communication, and conflict management would influence staff performance and driven quality care. Portraying the organizations values will motivate healthcare professionals and improve productivity.
- A clinical governance framework needs to be implemented in the EC by the Infection Prevention Specialist. Daily assessments need to be done by health care professionals caring for the critically ill patient to ensure compliance with policies and standards.
- National Core Standards have to be applied in the health sector. Patient safety, clinical governance and clinical care must exist within the establishment to reduce harm to the lowest possible level. Healthcare professionals must take ownership.
- Health care professionals at all levels need to be empowered to be more active in decision-making and policy development.
- Registered nurses must be empowered to advocate for patients' rights and a quality health care systems. Introducing healthcare professionals to "The Voice Project" by the Rural Health Advocacy Project (RHAP) will help in attaining this.

- Strategic focus on ethical and moral principles must be applied by healthcare professionals when confronted with the decision to do non-nursing tasks.
- Registered nurses caring for the critically ill patients must be enabled to be innovators of care in challenging contexts such as the one described in this study.

5.4 LIMITATIONS OF THE STUDY

The limitations of this study are that the research was conducted in a single regional hospital in the Western Cape, SA. Some participants were hesitant to participate due to their manager's unwillingness to accommodate the researcher in the setting. This affected the sample size and therefore the generalizability of the findings was restricted accordingly.

5.5 FUTURE RESEARCH

The following research areas could be explored further:

- The experience of health care staff caring for the critically ill patient that are transferred from the EC into the critical care units in SA.
- The experience of family members of the critically ill patient in the EC and their emotional support requirements.
- Morbidity and mortality studies of critically ill patients after delayed transfer from an EC.

5.6 CONCLUSION

Delayed transfer of critically ill patients from an EC is a concern that affects the patient, their loved ones, and the health care staff who provide this care. This study concluded that the lack of resources negatively affects staff ability to function optimally. The perceived lack of managerial support and autocratic leadership style adversely affect staff morale. The voice of nurses should not be muffled in their attempt to advocate for optimal care of the critically ill patient. Waiting time in the EC is also affected due to the limited resources of staff, equipment, and open accessible high care beds. The research methodology allowed the researcher to give a voice to the health care staff's experiences in this setting and to some of their recommendations.

In this chapter, the discussions focused on the input, process, output, and feedback factors as perceived by the participants. Additionally, references were made to applicable literature. Recommendations were made based on the findings which centred on adequate resources, leadership development, clinical governance, staff training and patient flow and referral system strengthening. This study contributes to the body of knowledge regarding health care professionals' experiences of delayed transfer of critically ill patients from an EC and can contribute to improved health care to all, especially the critically ill patient.

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APPENDICES

APPENDIX 1: ETHICAL APPROVAL FROM STELLENBOSCH UNIVERSITY



UNIVERSITEIT • STELLENBOSCH • UNIVERSITY
jou kennisvenoot • your knowledge partner

16-May-2017 Bester, Marilyne M

Ethics Reference #: S17/03/056

Title: The experiences of health care staff about delayed transfer of critically ill patients from an emergency centre in a Regional Hospital, Western Cape, South Africa.

Response to Modifications- (New Application)

Dear Miss Marilyne Bester,

The **Response to Modifications - (New Application)** received on **25-Apr-2017**, was reviewed by members of **Health Research Ethics Committee 1** via Expedited review procedures on **11-May-2017** and was approved. Please note the following information about your approved research protocol:

Protocol Approval Period: **16-May-2017 -15-May-2018**

Please remember to use your **protocol number (S17/03/056)** on any documents or correspondence with the HREC concerning your research protocol. Please note that the HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review:

Please note a template of the progress report is obtainable on www.sun.ac.za/rds and should be submitted to the Committee before the year has expired. The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit. Translation of the consent document to the language applicable to the study participants should be submitted.

Federal Wide Assurance Number: 00001372 Institutional Review Board (IRB) Number: IRB0005239

The Health Research Ethics Committee complies with the SA National Health Act No.61 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 Part 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

APPENDIX 2 (A): PERMISSION OBTAINED FROM DEPARTMENT OF HEALTH



STRATEGY & HEALTH SUPPORT

Health.Research@westerncape.gov.za
tel: +27 21 483 6857; fax: +27 21 483 9895
5th Floor, Norton Rose House,, 8 Riebeeck Street, Cape Town, 8001
www.capegateway.gov.za

REFERENCE: WC_2017RP2_309
ENQUIRIES: Ms Charlene Roderick

Stellenbosch University

Matieland

Private Bag X1

7602

For attention: Ms Marilyne Bester

Re: **The experiences of healthcare staff about delayed transfer of critically ill patients in an emergency centre in a Regional Hospital.**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact following people to assist you with any further enquiries in accessing the following sites:

Paarl Hospital

Dr Jacobus Louw

021 860 2695

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. Researchers, in accessing provincial health facilities, are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within six months of completion of research. This can be submitted to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).

3. In the event where the research project goes beyond the *estimated completion date* which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
4. The reference number above should be quoted in all future correspondence.

Yours sincerely



AS HAWKRIDGE.

DR A HAWKRIDGE

DIRECTOR: HEALTH IMPACT ASSESSMENT

DATE: 9/6/2017.

APPENDIX 2 (B): PERMISSION OBTAINED FROM INSTITUTION



To whom it may concern

Regarding: Research WC_2017RP2_309 Health care staff experiences with regard to delayed transfer of critically ill patients from an emergency centre in the Western Cape, South Africa.

This letter serves as permission for access to Paarl Hospital.

Regards

Dr Jacobus Louw

26/05/2017

A handwritten signature in black ink, appearing to be "J. Louw", written in a cursive style.

APPENDIX 3: PARTICIPATION INFORMATION LEAFLET AND DECLARATION OF CONSENT BY PARTICIPANT



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PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM

TITLE OF THE RESEARCH PROJECT: Health care staff experience with regard delayed transfer of critically ill patients from an emergency centre in the Western Cape, South Africa.

PRINCIPAL INVESTIGATOR: Miss Marilyne Bester

CONTACT NUMBER: 082 394 2786

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this research. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

WHAT IS THIS RESEARCH STUDY ALL ABOUT?

The purpose of this research is to explore the experiences of health care staff with regard to delayed admission of the critically ill patients from an emergency centre at

your hospital. You are being asked to take part in this study because your experiences on caring for the critically ill patient in the emergency centre are important for this research project.

Procedure

Your participation will be a face-to-face audio taped interview that will be held in the vicinity of the hospital. The duration of the interview will be approximately 1hour. This interview will be conducted at your convenience. Approximately 10 participants will be interviewed.

Benefits

The information from this study may benefit you, other health care professionals as well the critically ill patient at the emergency centre. Lastly it will contribute to best practice and quality care in health care services at your institution.

Voluntary participation/Withdrawal

Participation in this study is voluntary and you are under no obligation to participate. You can withdraw at any time without any repercussions. Should you withdraw for emotional or any other reason and need support, a cellphone with airtime will be provided to contact the Independent Counseling and Advisory Services (ICAS). They can be reach at (011) 380 6800.

Risks

No risks are foreseen during this process.

Confidentiality

All information gathered during the interview will remain confidential and anonymity will be maintained throughout the study. The data will be stored in a secure place and only my supervisor an I will have access to your interview. Information from the study may be published for research purpose but your identity will be kept confidential.

Payment

You will not be paid to take part in the study but refreshments will be served before the interview.

Cost

There will be no costs involved for you, if you do take part.

Ethical Approval

The study has been approved by the Health Research Ethics Committee of Stellenbosch University and the Western Cape Government of Health. The contact details of the committee are (021) 938 9657 and the email is ethics@sun.ac.za

Questions

If you have any questions about this study, you may contact Ms Marilyn Bester at 0823942786. Thank you for your time and willingness to participate in this study.

Declaration by participant

By signing below, I agree to take part in a research study entitled **“The experiences of health care staff about delayed transfer of critically ill patients from an emergency centre in the Western Cape, South Africa.**

I declare that:

- I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.

- I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) on (*date*)
2017.

.....
Signature of participant

.....
Signature of witness

Declaration by investigator

I (*name*) declare that:

- I explained the information in this document to
.....
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use a interpreter.

Signed at (*place*) on (*date*)
2017.

.....
Signature of investigator

.....
Signature of witness

APPENDIX 4: INTERVIEW GUIDE

- Q1. Describe your experience about delayed transfer of critically ill patients at the emergency centre?
- Q2. What are your major concerns about critically ill patients in the emergency centre?
- Q3. What can possibly be done to improve the care for critically ill patients in the emergency centre? If the participants raised specific concerns for example: quality of care or staff workload and morale in the emergency centre the following probes were used:
- Can you tell me more about this issue?
 - Please elaborate on this issue?
 - Can you explain what you mean regarding this issue?
- Q4 Do you have any other comments?

Probes

How do you experience quality care, staff workload and morale in the emergency centre?

Do you have any recommendation for this problem of delayed transfer of critically ill patients at the emergency centre?

APPENDIX 5: CONFIDENTIALITY AGREEMENT WITH DATA TRANSCRIBER

Johanna Venter

53 Church Street
Paarl
7646

25/07/2017

I hereby agree that any digital recorded information I obtained as a transcriber during Miss M Bester research on "***The experiences of healthcare staff about delay transfer of critically ill patient from an emergency centre in a regional hospital***" will be kept confidential on a permanent basis.

I will not inform anyone else about the content of the interviews. I will also abstain from making any duplicates of the recorded interviews. The recorded interviews will be deleted consequent to the completion of the transcription. None of the content will be forwarded to any other persons under any circumstances.



JOHANNA I VENTER

APPENDIX 6: DECLARATIONS BY LANGUAGE AND TECHNICAL EDITOR
DECLARATION BY EDITOR

To whom it may concern

This letter serves as confirmation that I, Selene Delpont, edited the language, referencing, and format of Marilyne Bester's master's thesis.

Sincerely,

Selene Delpont

Freelance editor