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IMPROVING PATIENT HANDOVER PRACTICES FROM EMERGENCY CARE PRACTITIONERS TO HEALTHCARE PROFESSIONALS

by

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Declaration

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I, Santel de Lange, declare this research study titled "Improving patient handover practices from emergency care practitioners to healthcare professionals" to be my own work. All sources used or quoted have been indicated and acknowledged by means of complete references. I further declare that this work has not been submitted for any other degree at any other institution.

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Santel de Lange   Date

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Abstract

Background

Patient handovers in the emergency department (ED) of a hospital are unique. The transfer of accountability and responsibility from one healthcare professional to the next is vital in ensuring safe and continuous patient care.

Research problem

Patient handovers in emergency departments are an essential part of good communication practices to ensure quality patient care. The environment in an emergency department is unique and the patient handover process is a high-risk situation. It has been proved that an effective patient handover should include verbal and written information.

Research questions

The research questions were: What are the current patient handover practices from emergency care practitioners to healthcare professionals in a selected ED? What strategies can be implemented to improve patient handover practices from emergency care practitioners to healthcare professionals in a selected ED?

Research design

A qualitative design was followed.

Population, sampling and sample size

Convenience sampling was used and 20 patient handovers were observed. Emergency care practitioners and healthcare professionals involved in patient handovers at the selected emergency department took part in the research and their informed consent was obtained beforehand.

Data collection

Data was collected during unstructured observations of patient handovers and using the Workplace Culture Critical Analysis Tool.

Data analysis

Data was analysed by means of the creative hermeneutic data analysis method.

Main findings

Five themes were derived from the data: communication (the overarching theme), disrespect, environment, handover and confidentiality. Based on these themes,

strategies for improving patient handovers between emergency care practitioners and healthcare professionals were identified collaboratively.

Key words

Emergency care practitioner, Emergency department, Handover practices, Healthcare professional, Participant observation.

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ECP   Emergency care practitioner

ED   Emergency department

CHAPTER 1: ORIENTATION TO THE STUDY

1.1 INTRODUCTION

An emergency department (ED) is a unique environment and its patient handover practices are quite different from those in other departments (Bost, Crilly and Chaboyer 2011:037; Kapadia and Addison 2012:120). The ED is described by Laxmisan, Hakimzaba, Sayon, Green, Zhang and Patel (2007:801) as well as Bost, et al (2011:037) as a complex, busy and dynamic environment. In this dynamic environment where time is of the essence and saving lives is the priority, fast patient handover practices are part of the daily routine (Evans, Murray, Patrick, Fitzgerald, Smith and Cameron 2010:1).

Patient handover practices, which occurs in the ED at the point where pre-hospital and in-hospital care intersect, is vital in ensuring the continuous and safe provision of care to ill or injured patients (Dean 2012:7). The majority of ill or injured patients' journeys start in a pre-hospital environment, in other words an emergency scene to which an emergency care practitioner is dispatched. Once at the scene, the emergency care practitioner will use basic, intermediate and/or advanced interventions to stabilise the patient and then transport the patient to an appropriate ED where a patient handover will occur. During this patient handover, accountability and responsibility for patient care are transferred from the emergency care practitioners to the healthcare professionals (Yong, Dent and Weiland 2008:150).

Transfer of information during patient handovers is important, and factors affecting this transfer have been identified worldwide, for instance, hectic environments (like an ED), staff workload, experience and education levels of the staff involved in patient handover practices and ineffective listening skills of multi-disciplinary team members (Bost, Crilly, Wallis, Patterson and Chaboyer 2010:216; Evans, Murray, Patrick, Fitzgerald, Smith and Cameron 2010:3), and workplace culture (McCormack and McCance 2010:3). Workplace culture refers to the "way things are done around

here" (Manley 2000:37; 2004 after Drennan 1992:3). Multiple tasks need to be performed every time a patient is brought through the doors of an ED. As the members of the multi-disciplinary team prioritise saving the life of an ill or injured patient who is admitted they initiate life-saving interventions immediately and pay less heed to other tasks, such as patient handover (Van Eeden 2009:1).

Nevertheless, accurate and precise patient handover is needed in order for healthcare professionals to continue with patient care as quickly, safely and efficiently as possible. Spooner, Chaboyer, Corley, Hammond and Fraser (2013:215) state that good patient handovers increase patient safety, decrease mortality rates, ensure continuity in patient care and increase patient satisfaction. In addition, Dawson, King and Grantham (2013:393) identify effective patient handover as essential for optimum patient care delivery. Bost, et al (2010:215) describe an ideal patient handover as a process during which all problems are clearly stated, and a non-ideal patient handover as a process characterised by complex problems and uncertainties. It is clear that there is a link between an ideal patient handover and patient safety (Manser and Foster 2011:187).

The patient handover process includes transferring information on the management of a patient and responsibility and accountability from one healthcare provider to another (Davies and Priestly 2006:50; Jorm, White and Kaneen 2009:S108; Randell, Wilson and Woodward 2011:803; Wilson 2011:22). In the ED this transferral occurs between the emergency care practitioners and the healthcare professionals. Verbal patient handovers usually occur first, followed by a written record summarising the management and interventions implemented by the emergency care practitioners (Yong, et al 2008:153). During the patient handover and before the emergency care practitioner leaves, the healthcare professional may ask questions to clarify uncertainties pertaining to the emergency care practitioner's pre-hospital treatment. Dawson, et al (2013: 393) and Yong, et al (2008:150) remark that good patient handovers are vital to ensure continuity of optimal patient care. Conversely, poor patient handovers may lead to compromised patient care as the healthcare

professionals in the ED may have to deal with uncertainties pertaining to patient management in the pre-hospital environment (Bost, et al 2010:215).

The objective of the current research study was to identify problems relating to patient handover practices from emergency care practitioners to health care professionals with a view to improving the strategies relating to these practices. The study was conducted in a selected ED where it was observed that patient handovers between emergency care practitioners and healthcare professionals where not done according to a specific structure and that there are various factors such as the hectic environment affecting listening skills of staff, staff workload and training and experience of staff in the ED as also identified by Bost et al (2010:216). The prevailing ED workplace culture of prioritising the saving of lives might have affected the way in which patient handovers were conducted, and, therefore, it was regarded as imperative to make the emergency care practitioners and healthcare professionals involved in patient handovers aware of the current workplace culture and challenges relating to patient handovers. This was done by getting the emergency care practitioners and healthcare professionals to observe the current workplace culture pertaining to patient handover practices in order to guide them in considering and collaboratively planning future strategies to improve patient handover practices.

Since emergency care practitioners will have the first contact with a patient on arrival on scene it is imperative that they convey all of the information (during the patient handover) obtained on scene accurately to healthcare professionals once in the ED.

1.2 BACKGROUND TO THE STUDY

In many countries, the practice is to dispatch emergency care practitioners when members of the public call them out to attend to emergencies in the community. Upon arrival on the scene, emergency care practitioners assess and manage the patient(s), focussing first on those whose lives are in danger, and transport them to an ED for further treatment.

Once at the ED the emergency care practitioner hands the patient over to a healthcare professional in the ED. Patients brought into the ED are triaged, in other words they are sorted into different categories reflecting the urgency of their care needed (Gilboy 2010:59). In South Africa, as well as in the ED relevant in this study, the South African Triage Scale is used to triage patients according to their needs into different colours (red, orange, yellow and green) (Augustyn 2011:26). The fundamental aim of all structures used in patient handovers is to achieve the most efficient transfer of high-quality information when responsibility for patients is transitioned (National Patient Safety Agency (Australian Medical Association) 2006:7; Russel, Doggett, Dawda and Wells 2013:8).

Patient handover can be done using different methods, such as digital media, paper-based media and/or displayed media (for instance, a white board). It can also be done verbally (face to face or by telephone) or in writing (Bost, et al 2010:215). In the ED where the study was conducted the initial patient handovers between the emergency care practitioners and the healthcare professionals were done verbally, followed by a written document summarising the emergency care practitioners' pre-hospital management, a practice which is in line with the views of Spooner, et al (2013:214) and Yong, et al (2008:153).

Patient handover is an integral part of safe patient care, but it may also be regarded as a high-risk activity (Jorm, et al 2009:S108). The challenges of patient handovers in the ED, which occur between emergency care practitioners working in the pre-hospital environment and the healthcare professionals working in the ED, differ from those in other departments (such as an operating theatre or a general ward) because the hectic activity in the ED environment is unique (Bost, et al 2011:037; Kapadia and Addison 2012:120). The ED environment is characterised by multiple interruptions, which can lead to human errors, have a negative influence on the effective performance of healthcare professionals during patient handover, and affect patient care (Kapadia and Addison 2012:120). Increased patient acuity and overcrowding are factors contributing to the creation of an environment of interruptions that could impact patient handover negatively (Bost, et al 2010: 211).

Regular interruptions and noise in the ED are also identified by Wilson (2011:22) as major reasons for information loss during patient handover. Other possible factors that have been identified as influencing patient handover are the education levels and prior experience of emergency care practitioners and health care professionals, staff workload, and ineffective listening skills (Bost, et al 2010:216). Furthermore, not using structured processes and a commonly understood language during patient handover can impact on the quality of patient handovers (Bost, et al 2010:218; Dawson, et al 2013:396).

As early as 1995, Caroline (1995:934) recommended that emergency care practitioners use a set of guidelines developed for handing over their patients to ensure that all important information was transferred during that process. In 1998 structured patient handovers were also recommended by O'Keefe, Limmer, Grant, Murray and Bergeron (1998:679). It is, however, clear that despite these guidelines (focussing on the emergency care practitioner only) the communication between emergency care practitioners and healthcare professionals remains a challenge.

In the ED where the study was conducted there were no clear guidelines or protocols regarding patient handover practices. Patient handover occurred in a haphazard way could be because it was not regarded as a priority. It could be reasoned that emergency care practitioners and healthcare professionals were not aware of the importance of patient handover practices in the ED. One way of bringing about a change in the workplace culture relating to patient handover practices might be to involve these practitioners in observing their current practices and to provide them with an opportunity to collaboratively plan strategies to improve their patient handover practices.

1.3 PROBLEM STATEMENT

Patient handovers occur daily in all EDs and are an essential part of good communication practices that ensure quality patient care (Caroll, Williams and Gallivan 2013:10). A patient handover in the ED is a high-risk situation owing to the unique environment and the multiple interruptions that occur (Kapadia and Addison

2012:120) and it bears no comparison with a patient handover in any other clinical situation (for instance, in a ward or an intensive care unit) (Spooner, et al 2013:214). Effective patient handovers ensure continuity of care in the ED and can enhance the safety and quality of the care (Jorm, et al 2009:S108; Manser and Foster 2011:187). To ensure an effective patient handover the process should include the transfer of verbal and written information (the latter to be entered in the emergency care practitioners' records) (Bruce and Suserud 2005:203; Jensen, et al 2013:965; Meisel and Smith 2015:81 and Yong, et al 2008:150).

The problem identified in the ED where the research was done was that current patient handover practices focussed mainly on verbal patient handovers. These verbal handovers were unstructured and not always supported by written records, which are vital as suggested by Yong, et al (2008:151). In addition, healthcare professionals did not pay attention (or listen) when patient handovers were taking place, which might contribute to the loss of important information about pre-hospital situations conveyed by emergency care practitioners. Inaccurate or incomplete information may affect the quality of care patients receive in the ED (Caroll, et al 2013:10; Jensen, Lippert and Ostergaard 2013:964; Kerr, Lu, McKinlay and Fuller 2011:348).

Through collaboration and communication with emergency care practitioners and healthcare professionals, the researcher envisioned that she could raise awareness of current patient handover practices and identify future strategies with the aim of improving these practices and the quality of patient care in the ED.

1.4 RESEARCH QUESTIONS

Based on the rationale and the problem statement set out for this study, the following research questions were formulated:

- What are the current practices for patient handover from emergency care practitioners to health care professionals in a selected ED?

- What strategies can be identified to improve practices for patient handover from emergency care practitioners to healthcare professionals in a selected ED?

1.5 SIGNIFICANCE OF THE STUDY

Improved patient handover practices can have an impact on 1) the patient, 2) healthcare professionals, 3) education, 4) management and 5) current policies. Through observing current patient handover practices, emergency care practitioners and healthcare professionals in the ED might become aware of challenges regarding their practices. Collaboratively planned strategies could be identified to guide future patient handover practices, which might lead to improved quality patient care (Spooner, et al 2013:215).

1.6 PARADIGM

According to Polit and Beck (2012:11) and de Vos, Strydom, Fouche and Delport (2011:40), a paradigm is a "world view", a person's general impression of the complexities of the world. Two distinct paradigms that can be identified in the field of nursing are positivism and constructivism. Positivists believe that reality can be studied and that information can be made known. Their research is usually aimed at understanding underlying causes.

Constructivists believe in taking apart old ideas and putting them together again in new ways. The findings of a constructivist inquiry are usually the end product of an interaction between the inquirer and the participants. In the current study the researcher worked from a constructivist point of view, and the construction of new ideas (new patient handover practices) was done in conjunction with the participants. The new ideas (in the form of strategies) that were suggested after the participants and the researcher had collaboratively analysed the data (the findings) could be used in the future to improve current (old) processes of patient handover between emergency care practitioners and the healthcare professionals.

1.7 ASSUMPTIONS

The following philosophical assumptions applied in this research study.

1.7.1 Ontological assumptions

Ontology refers to the belief that specific constructed and co-constructed realities exist. Based on this premise, the researcher and participants construct evidence (Denzin and Lincoln 2011:103–105; Lee 2012:406). In the current research study, the participants, in collaboration with the researcher, constructed evidence during the observation of patient handovers between emergency care practitioners and healthcare professionals in the ED, after which they collaboratively developed strategies to improve their patient handover practices.

1.7.2 Epistemological assumptions

The epistemological assumption applicable in this study includes the co-creation of evidence by the researcher and the participants. The premise is that the researcher and the participants construct meaning based on their interaction with their surroundings and that they reach findings based on their interaction with one another (Denzin and Lincoln 2011:103–105; Lee 2012:407). In this research study, the researcher (observer) and participants (co-observers) observed the patient handovers occurring between emergency care practitioners and healthcare professionals in the relevant ED setting. Through collaboratively collecting and analysing observation data, evidence was co-created.

1.7.3 Methodological assumptions

Methodological assumptions refer to the methodology used to guide a study. In accordance with a constructivist methodological assumption, qualitative research methods are used (Denzin and Lincoln 2011:103–105). By means of qualitative methods a phenomenon is interpreted, and one of the data collection techniques used can be that of observation (Bunnis and Kelly 2010:362–363). In this study the observation method was used to gather data on patient handover practices, and by including the participants in the observation process their awareness of current patient handover practices was raised. Once awareness had been created,

strategies were identified for possible implementation to improve patient handover practices.

1.8 KEY CONCEPTS/CONCEPT CLARIFICATION

The concepts used in this study are defined here in order to prevent any misunderstandings and to clarify the meaning of each concept used in the study.

1.8.1 Emergency care practitioner

Ainsworth-Smith (2012:4) defines an emergency care practitioner as a healthcare professional who has the required knowledge, skills and attitude necessary to deliver holistic care in a pre-hospital environment. An emergency care practitioner can be employed in a wide variety of settings and generally reports to a team leader. In various other studies emergency care practitioners are also referred to as paramedics (Dawson, et al 2013:396; Dean 2012:7; Yong, et al 2008:151).

In the context of this study, emergency care practitioners refer to all personnel who work in the pre-hospital environment and are responsible for handing over patients to healthcare professionals who work in the ED. In South Africa (and for the purpose of this study), emergency care practitioners are categorised based on their qualifications and the services they render:

- Basic life support (BLS): An emergency care practitioner who has obtained a certificate and provides basic life support in a pre-hospital environment
- Intermediate life support (ILS): An emergency care practitioner who has obtained a certificate and provides intermediate life support in a pre-hospital environment
- Advanced life support (ALS): An emergency care practitioner who has obtained a certificate and provides advanced life support in a pre-hospital environment

1.8.2 Healthcare professional

For the purpose of this study, a healthcare professional refers to a medical doctor registered with the Health Professions Council of South Africa and a professional nurse, staff nurse and auxiliary nurse registered with the South African Nursing

Council under section 31 and working in an ED (South Africa 2003; Nursing Act 33 of 2005). Professional nurses are also referred to as registered nurses and staff nurses to enrolled nurses (Muller 2002:47).

1.8.3 Patient handover practices

Patient handover is a process that includes a description of the management that a patient has received previously and involves the transfer of information, responsibility and accountability from one healthcare professional to another (Davies and Priestly 2006:50; Jorm, et al 2009:S108; Wilson 2011:22). For the purpose of this study, patient handover practices will refer to all patient handovers occurring between emergency care practitioners and healthcare professionals in the ED involving the transfer of information from the emergency care practitioner to the healthcare professional about the management the patient received in the pre-hospital environment. The transfer process includes the transfer of accountability and responsibility for the patient as well as of all patient information and documentation necessary for the continuation of safe patient care.

1.9 THE CONTEXT

The study was conducted in a private Gauteng hospital with a bed capacity of 267. Services rendered by the hospital include general surgery, orthopaedic surgery, internal medicine, obstetric services and gynaecological services. The hospital has a dedicated paediatric unit, a neonatal intensive care unit, a general intensive care unit, cardiology units, gynaecological and obstetrics unit, two medical wards, orthopaedic ward, surgical ward, oncology ward, day ward and a 24-hour ED.

Patients of all ages with undiagnosed problems that vary in degree are admitted to the ED. With the use of the South African Triage Scale (SATS) all patients entering the ED are triaged and sorted according to the level of severity of their injuries or problems based on the signs and symptoms they present with. Patients sorted as "red" are critically ill and/or injured and require immediate management. Patients sorted as "orange" are regarded as very urgent and should be treated within ten

minutes of arrival in the ED. Patients sorted as "yellow" are those with serious signs and symptoms and should be treated within one hour of arrival at the ED, whereas patients sorted as "green" are regarded as non-urgent and should be treated within four hours of arrival at the ED (Cheema and Twomey 2012:7).

The ED consists of nine beds, which include two adult or paediatric resuscitation beds in the resuscitation room, five beds for the management of ill or injured patients in the five-bed cubicle area and two beds in the procedure room used for the performance of more invasive procedures on ill or injured patients. A triage room is located to the left of the entrance to the ED where patients go to be triaged before being taken through for the management of their problems.

According to the 2014 statistics of the relevant ED, approximately 1 258 patients are seen in the ED each month, of which about 132 are triaged as red, 300 as orange, 470 as yellow and 300 as green. Different ambulance services and emergency care practitioners bring in about 140 of these patients per month and hand them over to the healthcare professionals at the hospital; the remaining patients are brought in by family or community members. In Table 1.1 a summary of the patients triaged over a period of three months is provided. The difference in the patient's triaged and treated in the ED ascribes to those patients triaged but then not treated for various reasons.

Table 1.1: Summary of patients triaged (May–July 2014)

Category	May 2014	June 2014	July 2014
Red	118	138	140
Orange	313	337	355
Yellow	494	486	475
Green	279	344	295
Total	**1204**	**1305**	**1265**

1.10 RESEARCH DESIGN AND METHODS

A research design can be described as a blueprint for conducting a study and it assists the researcher in having better control over the outcome of the study findings (Burns and Grove 2011:253). A qualitative research design was used in this study.

A research method refers to the method used in a study to gather data. Data includes all the information the researcher needs to achieve the objective(s) of the study and data gathering refers to the method(s) the researcher uses to obtain the data (Bothma, Greef, Mulaudzi and Wright 2010:199; Brink, Van der Walt and Van Rensburg 2013:199). The research methods used are summarised in Table 1.2 and include the population, sampling and sample size, data collection, data analysis and strategies used to enhance trustworthiness.

Table 1.2: Summary of the research methods used

Research methods	Applied in this study (continue)
Population	The population represents the whole collection of cases the researcher is interested in (Polit and Beck 2012:273) and it refers to the particular group of people that is focussed on and meets the criteria for inclusion in the study (Burns and Grove 2011:51). The study population for this research included all the emergency care practitioners from the two main private ambulance groups that transported patients to the relevant hospital and were involved in handing over patients to the ED, as well as all the healthcare professionals in the selected ED of a Gauteng hospital who received the patients from the emergency care practitioners. The inclusion criteria for the participants were: • Emergency care practitioners who were involved in patient handover practices in the ED at the time of observation and who had consented to participate in the study • Healthcare professionals who were present at and involved in patient handover practices in the ED at the time of observation and who had consented to participate in the study

Research methods	Applied in this study (continue)
(population continue)	One exclusion criterion identified for this study was participants involved in patient handover practices pertaining to patients triaged as red. The rationale followed was that these patients were critically ill or injured and that patient handover practices in these cases might be more complex.
Sampling	Sampling is the process of selecting subjects from the population that are representative of the entire population for use in the research (Polit and Beck 2012:275). Convenience sampling (non-probability sampling method), which involves selecting the most available participants of the population, was used (Polit and Beck 2012:276). In this study, the most available participants were the emergency care practitioners and healthcare professionals who were involved in the daily patient handover processes at the selected ED and that the researcher could observe.
Sample size	During the observation phase, four participants (emergency nurses) acted as co-observers. Eight participants (two emergency care practitioners and six emergency nurses (healthcare professionals)) were involved during the data analysis session. Twelve healthcare professionals and ten emergency care practitioners were observed.
Data collection	Polit and Beck (2012:725) define data collection as the gathering of information in order to answer a research question. Observational data collection methods were used: people (emergency care practitioners and healthcare professionals) were observed in their natural setting (the ED) performing a daily task (patient handover) (Polit and Beck 2012:544), and the actions observed were recorded in a factual manner (Given 2008:3). Unstructured observation (see Annexure C) was used and data was collected in five phases as described by McCormack, Henderson, Wilson and Wright (2009:30) using an adapted Workplace Culture Critical Analysis Tool.
Data analysis	Data analysis is the systematic organisation and synthesis of the research data collected by the researcher (Polit and Beck 2012:725). In this research the creative hermeneutic data analysis method and steps as suggested by Boomer and McCormack (2010:644) were used to analyse the data.

The design and research methods used to address the research questions are discussed in depth in Chapter 3.

1.11 ETHICAL CONSIDERATIONS

Before commencing this study the researcher obtained permission from the ethical committee of the Faculty of Health Sciences of the University concerned (see Annexure A1), from the selected hospital (see Annexure A2) and from the two selected ambulance service providers (see Annexure A3 and Annexure A4) for the study to be conducted.

Ethics refer to the moral obligations a researcher has towards research participants (Polit and Beck 2012:727). Polit and Beck (2012:152) cite the Belmont report in which three principles of ethical conduct are defined, namely: beneficence, respect for human dignity and justice. These principles and how they were applied in the study are discussed below.

With regard to beneficence, the researcher made sure that the participants were not harmed and that they reaped the maximum benefits from the research (Polit and Beck 2012:152). At a meeting held with the participants during the pre-observation phase they were informed of the benefits they would gain and of how and when information would be collected. A participant information leaflet (see Annexure B) was distributed to the participants, which all of them signed voluntarily. No data was collected without the knowledge and consent of the participants.

Respect for human dignity includes the right to self-determination and the right to full disclosure. The participants voluntarily decided to be part of the research. The researcher accepted responsibility for providing the participants with full information about the research and their right to refuse to participate (Polit and Beck 2012:154). Written informed consent was obtained from all the participants in the research. As stated on the participant information leaflet and explained by the researcher, the participants had the opportunity to withdraw from the research at any time.

Justice refers to the right of participants to be treated fairly and to have their privacy respected (Polit and Beck 2012:155). All issues relating to the confidentiality of

participant information were taken into consideration. The privacy of participants was maintained throughout the observation sessions as no names or identifiable affiliations were written down in the observation tool.

1.12 DELINEATION

According to a definition in the Merriam-Webster dictionary (not dated (n.d)), to delineate is "to clearly show or describe something". Delineation in terms of this study entails the focus on observing the patient handover practices that occur between emergency care practitioners and health care professionals in a single ED in a single private hospital in Gauteng. Patients brought in by ambulance, accompanied by an emergency care practitioner and triaged in the ED as orange, yellow or green were observed. Patients triaged as red were excluded as these patients were critically ill or injured and their handing over required a different approach.

1.13 LAYOUT OF THE CHAPTERS

The layout of the chapters in this study is presented in Table 1.3.

Table 1.3: Outline of the chapters

Chapter	Chapter title	Chapter description
Chapter 1	Orientation to the study	This chapter presents an orientation to the entire study. It gives a brief introduction of the research design and methods used.
Chapter 2	Theoretical underpinning	An in-depth literature discussion is presented that supports the information given in the introduction and background sections. The findings on patient handover practices are also reported on.
Chapter 3	Research design and methods	This chapter contains an in-depth discussion of the research methodology used, with specific reference to the research design, research method and process, actions taken to enhance trustworthiness of the study and the

		specific ethical considerations adhered to during the study.
Chapter 4	Research findings and discussion	In this chapter the research findings are analysed and the literature to support the findings are discussed in detail.
Chapter 5	Recommendations and conclusion	The conclusions drawn from the research findings, recommendations to enhance the patient handover practices between emergency care practitioners and healthcare professionals, and the limitations of this study are covered in this chapter.

1.14 SUMMARY

In Chapter 1 an orientation to the study was presented and attention was paid to aspects that included the research design and methods used and the ethical considerations that were taken into account. Chapter 2 provides an in-depth literature discussion that supports the introduction and background given in Chapter 1.

CHAPTER 2: THEORETICAL UNDERPINNING

2.1 INTRODUCTION

In Chapter 1, an orientation to the study was given. In Chapter 2, a review of existing literature relating to the research topic, namely improving patient handover practices from emergency care practitioners to healthcare professionals in an ED, provides a theoretical underpinning to the research topic. Specific attention is paid to an overview of patient handover practices, methods of patient handover, the value of patient handover, the handover environment, factors influencing patient handover practices and ideal versus non ideal patient handovers.

2.2 OVERVIEW

Patient handover practices have been implemented for many years for the purpose of transferring important information about a patient from one person to another (Aase, Soyland and Hansen 2011:1; Anderson, Malone, Shanahan and Manning 2014:663; Kerr, et al 2011:342; Poot, De Bruijne, Wouters, De Groot and Wagner 2014:166). During patient handover, information is transferred from one healthcare provider to the next or from one shift to the next and the transfer has to be as accurate and reliable as possible to ensure the continuation of safe patient care (Calleja, Aitken and Cooke 2011:5; Gage 2013:43; Sujan, Spurgeon and Cooke 2015:59; Ye, Taylor, Knott, Dent and MacBean 2007:434). Good patient handovers result in good patient care, therefore, the handing over process is probably one of the most important tasks performed by healthcare practitioners in all areas of healthcare. Good handover in an ED environment where the patient handovers between emergency care practitioners and healthcare professionals are equally important, although complex (Dawson, et al 2013:393).

Patient handover can be a complex process involving multiple functions, with the most important function being that of communicating information. Through the accurate transfer of information during patient handover, the safe transition of health

care from one healthcare professional to another is achieved (Farhan, Brown, Woloshynowych and Vincent 2012:1).

According to Gage (2013:43), McFetridge, Gillespie, Goode and Melby (2007:262) and Talbot and Bleetman (2007:541), a patient handover occurs whenever there is transition in patient care. Dawson, et al (2013:394), Wilson (2011:22) and Lawrence, Tomolo, Garlisi and Aron (2008:256) further describe this transition of care as the transfer of information as well as of responsibility between healthcare professionals. Patient handover is also the process of transferring and accepting responsibility of some or all the aspects of care of a patient or a group of patients (Dawson, et al 2013:394; Jensen, et al 2013:964; Randell, et al 2011:803; Siemsen, Madsen, Pedersen, Michaelsen, Pedersen, Andersen and Ostergaard 2012:439).

In an emergency care environment, patient handover includes the transfer of accurate information from emergency care practitioners to healthcare professionals in the ED. This transfer process is an integral part of emergency care, especially when it is impossible to obtain information from patients themselves (Chan, Trotter, Sennik, Langmann, Worster and Welsford 2014:1). The World Health Organization (2007:[1]) and Murray, Crouch and Ainsworth-Smith (2012:25) define patient handovers between emergency care practitioners and healthcare professionals as the transfer of care after arrival in an ED.

People all around the world make use of ambulance services to transport them to hospitals (EDs) when they are injured or ill (Dawson, et al 2013:393), and this use has shown a marked increase over the past 20 years. According to O'Keefe, et al (1998:7), the journey of a patient to hospital starts with the patient phoning the ambulance service, after which the ambulance is dispatched to the scene, the treatment of the patient is initiated on the scene, and the patient is transported to hospital by emergency care practitioners.

The first contact between emergency care practitioners (pre-hospital staff) and healthcare professionals (in-hospital staff) in the ED occurs upon arrival of the

patient in the ED at which point patient handover occurs (Bruce and Suserud 2005:203; Dean 2012:7). Patient handovers between emergency care practitioners and healthcare professionals in an ED occur multiple times on a daily basis (Jensen, et al 2013:964; Sujan, Spurgeon, et al 2015:60). During patient handover, it is of the utmost importance that the correct information regarding the patient's condition and pre-hospital management is transferred from the emergency care practitioner, who transfers the patient from the scene, and the healthcare professional, who receives the patient in the ED (Dean 2012:6). Patient handover is the glue that connects the pre-hospital environment with the in-hospital environment (the ED).

Dean (2012:7) stresses that it is important for the emergency care practitioners to convey all they know about the patients to the healthcare professionals in the ED in order to enable them to make a diagnosis and plan treatment. In most instances emergency care practitioners have only one opportunity to hand over patients to healthcare professionals in an ED; therefore, it must be done correctly. According to Farhan, et al (2012:1), patient handover is not formally taught to emergency care practitioners or healthcare professionals as part of their training and that teaching must be given to all healthcare personnel. Patient handover can, therefore, be seen as a skill that is learned and not taught, a skill that is an important activity in the ED workplace.

2.3 METHODS OF PATIENT HANDOVER

There are four major methods of patient handover that occur in practice, namely: traditional or verbal patient handover, recorded patient handover, written patient handover and bedside patient handover (Calleja, et al 2011:13; Kapadia and Addison 2012:120; Kerr, et al 2011:343). In recent years, another method has been added, namely, electronic patient handover (Randell, et al 2011:804). Each method is briefly discussed in Sections 2.3.1 to 2.3.4.

2.3.1 Verbal patient handover

Verbal patient handovers happen through face-to-face communication (Brown and Sims 2014:51) and can be used, for example, at the change of nursing shifts, as a communication tool between medical doctors (Randell, et al 2011:810), and at patient handovers between emergency care practitioners and healthcare professionals (Bost, et al 2010:212; Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus and Cameron 2010:460; Jensen, et al 2013:966).

Wilson (2011:23) finds that in an ED patient handover between shifts occurs primarily verbally and that little or no use is made of written documentation. Therefore, a nurse's memory is relied upon to transfer all relevant information to the next shift.

Verbal patient handover is the preferred and most used method of patient handover in the ED as it highlights important information and delivers information first hand (Sujan, Spurgeon, et al 2015:58). It has been reported that emergency care practitioners and healthcare professionals in the ED use verbal handovers most often as they have a need for face-to-face communication and explanations between them (Dawson, et al 2013:396; Murray, et al 2012:27). Despite being the preferred method it can be challenging and can result in inaccuracies owing to time constraints and the fact that patients are widely spread over the area of the ED (Randell, et al 2011:804). Therefore, one should consider the advantages and disadvantages of using verbal patient handovers.

2.3.1.1 Advantages and disadvantages of verbal patient handovers

An important advantage of a verbal patient handover is that it reduces the time spent on transferring relevant information (Evans, et al 2010:462). Other advantages include providing opportunities to improve team cohesion, to teach and to reflect on the shift (specifically when verbal communication takes place at the end of a shift) (Randell, et al 2011:810). Furthermore, verbal handovers allow opportunities for questioning, feedback, education and collaboration between colleagues (Sujan, Spurgeon, et al 2015:58).

However, a disadvantage of a verbal patient handover that has been highlighted by Randell, et al (2011:807) is that it gives personnel the opportunity to decide what information to focus on during patient handover, leading to possible information loss. In their research, Calleja, et al (2011:13) confirm the above when they state that in their study verbal-only patient handovers showed the most data loss after five cycles of handover and that incorrect data were handed over on several occasions. Kapadia and Addison (2012:121) as well as Manser and Foster (2011:184) discourage the use of verbal-only patient handover because of the increased risk of information loss over a period of time, especially with multiple patient handovers. Furthermore, information transfer during verbal patient handover happens only in the time period remembered by staff, after which it cannot be retrieved (Sujan, Spurgeon, et al 2015:58). During verbal patient handovers various interruptions divert staff's attention away from patient care, which can result in fragmented or delayed patient care delivery, especially when the patient handover process takes long (Randell, et al 2011:810). Verbal patient handovers are often used in environments where there can be interruptions, distractions and noise that impact on the quality of the patient handover (Sujan, Spurgeon, et al 2015:58).

A verbal patient handover can, however, be complemented by a written patient handover (Delupis, Mancini, Di Nota and Pisanelli 2015:67).

2.3.2 Written patient handover

Picton (2011:3) and Kerr, et al (2011:344) state that although patient handovers are usually conducted verbally, these practices are sometimes also written down. A written patient handover is usually in the form of a written document handed over from one healthcare provider to another and it contains all the patient information required to transfer care and responsibility to the next person. A written patient handover can be preceded or accompanied by a verbal patient handover, but this is not always practised, especially in the ED (Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al 2010:460). Furthermore in a study by Delupis, et al (2015:67) conducted in Italy most of the patient handovers occurred only in written format.

According to Chan, et al (2014:4), a written-only patient handover is definitely not the preferred method of patient handover for the emergency care practitioner, as the written document does not always record all the information on the pre-hospital care delivered. Murray, et al (2012:25) and Talbot and Bleetman (2007:541) suggest that other methods of patient handover are also needed to ensure information retention of patient handover in the ED between emergency care practitioners and healthcare professionals. However, these authors suggest that a written record provided by emergency care practitioners should always form part of the patient's documentation in the ED. As in the case of other patient handover methods, one should always consider the advantages and disadvantages of a written patient handover.

2.3.2.1 Advantages and disadvantages of a written patient handover

A written record is often the only data source that is allowed to be used in legal proceedings, which is a major advantage of a written patient handover. However, the combination of a verbal and a written patient handover can ensure increased data capturing, leading to safe patient care delivery (Calleja, et al 2011:13; Murray, et al 2012:24). According to Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al (2010:462) and Calleja, et al (2011:13), written-only patient handovers also show a steady data loss although not as much as with verbal-only patient handovers. In a study done by Delupis, et al (2015:67), it was found that when a written report was given to the triage nurse without a verbal handover being done, some information was never handed over and was lost because not all of it had been written down. For this reason a written record should always be supported by a verbal patient handover (Sujan and Spurgeon 2013:[3]).

2.3.3 Verbal patient handover followed by written patient handover

Kapadia and Addison (2012:120) are of the opinion that although multiple methods of patient handover are available, the best method is still perceived to be a verbal handover followed by a written record. Bruce and Suserud (2005:203), Jensen, et al (2013:965), Meisel and Smith (2015:81) and Yong, et al (2008:150) all indicate that patient handover in the ED is usually done through a combination of verbal and written elements, especially between emergency care practitioners and healthcare

professionals. All the information that is not handed over during verbal patient handover and is not recorded in a written document can be lost forever, which could negatively influence patient care (Talbot and Bleetman 2007:539). The advantages and disadvantages of a verbal patient handover followed by a written patient handover should similarly be considered.

2.3.3.1 Advantages and disadvantages of a verbal patient handover followed by a written patient handover

Admittedly, a verbal patient handover plays an important role in patient handover practices, but as only a written record can serve as evidence in a court of law it is important that emergency care practitioner follow up a verbal patient handover to a healthcare professional with a written record (Murray, et al 2012:27). It has been found that a verbal patient handover followed up by written information shows very little data loss and the retention of the most information compared to the other two types of patient handover, namely verbal only and written only (Calleja, et al 2011:13). This type of patient handover does, however, have some disadvantages.

According to Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al (2010:463) and Murray, et al (2012:25), one of the disadvantages of using a verbal handover followed by a written document is that emergency care practitioners sometimes record information not handed over verbally, which can lead to confusion about a patient's information. Nevertheless, as this is the only major disadvantage of a verbal patient handover followed up by a written record, this method has been used for many years in health care and it is still the most preferred method of patient handover.

With the development of technology, the method of electronic patient handover is being used by several health institutions today.

2.3.4 Electronic patient handover

The use of electronic patient handover has been met with much enthusiasm but most existing literature focusses on its use in medical shift handovers (Randell, et al

2011:804). Once again, this patient handover method has some advantages and disadvantages that should be kept in mind.

2.3.4.1 Advantages and disadvantages of electronic patient handover

One of the biggest disadvantages to electronic patient handover is that not all ED's and emergency care practitioners have access to electronic patient handover facilities.

However an electronic patient handover can decrease the time spent on documentation and it can be used to supplement a verbal patient handover (Jensen, et al 2013:966; Kapadia and Addison 2012:120; Randell, et al 2011:804). Both emergency care practitioners and healthcare professionals perceive electronic patient handover as a way to improve the quality of patient handover, ensuring continuity of patient care and preventing multiple patient handovers which lead to divided communication and loss of information (Cheung, Kelly, Beach, Berkeley, Bitterman, Broida, et al 2009:5; Jensen, et al 2013:966; Kapadia and Addison 2012:120; Randell, et al 2011:804; Talbot and Bleetman 2007:541). According to Till, Sall and Wilkinson (2014:3), the use of electronic patient handovers brings about more structured patient handovers by emergency care practitioners, which lead to a decrease in information loss.

Although the use of electronic patient handovers has advantages, staff still prefer and stress the importance of face-to-face verbal patient handovers (Cheung, et al 2009:5; Randell, et al 2011:804). As a verbal patient handover offers the opportunity of clarifying uncertainties by asking questions, this method ensures that information is transferred correctly and that there is continuation in patient care.

2.4 VALUE

Patient handover is one of the most important activities in healthcare and when done correctly can ensure patient safety, continuation of patient care, quality patient care

and reduction in the repetition of pre-hospital information. Patient handovers can also be used as an opportunity to give training (McFetridge, et al 2007:262).

The value of patient handover referred to above will be discussed in Sections 2.4.1 to 2.4.4.

2.4.1 Patient safety

Patient handovers are very important as they can ensure safe and continuous patient care (Gage 2013:43; Poot, et al 2014:166; World Health Organization 2007:[1]; Yong, et al 2008:150).The handover of information related to patient care is an important component of clinical practice to ensure safe patient care delivery (Chan, et al 2014:1). The safety of patients is also directly linked to correct inter-professional communication (Delupis, et al 2015:67), of which there are several different forms (as discussed in section 2.6 3), and the patient handover between emergency care practitioners and healthcare professionals is one of these forms of inter-professional communication.

Anderson, et al (2014:663) and Talbot and Bleetman (2007:539) are of the opinion that if patient handover is carried out incorrectly it can be the most dangerous activity threatening the safety of a patient. Jorm, et al (2009:S108) state that patient handover is a high-risk activity that forms an integral part of a healthcare professional's daily tasks to deliver safe patient care, and that it is important that all healthcare professionals acknowledge this. Patient handovers that are done correctly will ensure the safety of patients and the safe transition of care between emergency care practitioners and healthcare professionals.

2.4.2 Transition of care

During patient handover the transition of care from the emergency care practitioner to the healthcare professional occurs. To ensure that patient care transition occurs in the ED, patient handover between emergency care practitioners and healthcare professionals is necessary (Aase, et al 2011:1; Yong, et al 2008:150). Together with the transition of care, responsibility for the care of the patient is transferred, which is

what patient handover is all about (Sujan, Spurgeon, et al 2015:59). If patient handover is ineffective the transition of care will not be good, in which case the activity can be described as a dangerous one (Talbot and Bleetman 2007:539). Good transition of care will lead to continuity in patient care (McFetridge, et al 2007:262).

2.4.3 Training and socialising

Patient handover involves more than just communicating patient information from one person to another; it provides opportunities for training and socialisation between pre-hospital and in-hospital personnel. According to McFetridge, et al (2007:262), handing over patient information during this process can also provide an opportunity for education to take place at the bedside and an opportunity to enhance group cohesion among those involved in the patient handover.

2.4.4 Identification of new or further problems

Patient handover also provides all those involved in the care of a patient with an opportunity to take a fresh look at the patient and to identify potential new or further problems and complications, thereby preventing adverse events (Lawrence, et al 2008:257).

2.5 ENVIRONMENT

Patient handover from one healthcare professional or team to another is practised in several high-risk environments, such as aerospace, aviation and hospital emergency environments (for instance, in an ED) (Cheung, et al 2009:2). Furthermore, in-hospital patient handovers occur daily in multiple environments, including the ED, intensive care unit, theatre and general wards (Caroll, et al 2013:10; Kerr, et al 2011:344; Manser and Foster 2011:183; Poot, et al 2014:166; Randell, et al 2011:803; Siemsen, et al 2012:439; Spooner et al 2013:215). Patient handovers occur between different healthcare worker categories in the same or different disciplines and inter-departmentally (Sujan, Spurgeon, et al 2015:112). These handovers can involve different members of multi-disciplinary teams in different

settings, the physical transfer of patients from one setting to another, the transfer of patients between individuals from the same healthcare setting and often occurs between different levels of professional groups (Gage 2013:43; Manser and Foster 2011:194). Traditionally, the patient handover process was conducted away from the patient's bedside, either at the duty station, or in the tea room or the training room (Brown and Sims 2014:50). Over the years, bedside patient handover has become more prevalent in hospitals, including in EDs (Kerr, McKay, Klim, Kelly and McCann 2013:1686; McMurray, Chaboyer, Wallis, Johnson and Gehrke 2011:20; Meisel and Smith 2015:76).

In the ED environment, patient handover takes place multiple times a day (Dawson, et al 2013:393; Dean 2012:6; Delupis, et al 2015:63; Sujan, Spurgeon, et al 2015:112; Talbot and Bleetman 2007:539) between nursing staff at the change of shift, between doctors at the change of shift, between healthcare professionals working in the ED, between specialist consulted by the ED healthcare professionals (doctor) to take over a patient's management while the patient is still in the ED, and between emergency care practitioners and healthcare professionals (Farhan, et al 2012:1; Lawrence, et al 2008:1; Sujan, Spurgeon, et al 2015:113; Ye, et al 2007:434). Most patient handovers in the ED occur at the patient's bedside (Meisel and Smith 2015:76; McMurray, et al 2011:24; McMurray, Chaboyer, Wallis and Fetherston 2010:2586) but some occur in a central location, most commonly the duty station (Cheung, et al 2009:5).

The handover of patients and their problems is an important component of clinical practice, especially in high-acuity environments like an ED (Chan, et al 2014:1). Patient handover across care boundaries (pre-hospital to in-hospital) carries the risk of errors, which could be ascribed to the different backgrounds of emergency care practitioners and healthcare professionals, and errors will ultimately affect patient care (Lawrence, et al 2008:256; Sujan, Spurgeon, et al 2015:112). According to Bost, et al (2011:037), patient handovers between these two groups that might come from different cultures pose multiple challenges, especially in a busy environment. These authors also suggest that the high acuity of patients and overcrowding in an

ED, and the busy environment and interruptions that characterise an ED on a daily basis, can influence the quality of patient handover and, therefore, patient care. Ultimately, the ED is a complex, unique and unpredictable environment where the ability to conduct patient handovers and to receive information during patient handovers is a challenge (Dawson, et al 2013:396; Owen, Hemmings and Brown 2009:105). Multiple factors in the ED environment have a negative influence on how patient handovers are done.

A summary of the influencing factors identified in the environment in which patient handovers takes place is given in Table 2.1.

Table 2.1: Summary of factors influencing patient handovers

Influencing factors	Supporting references
Patient handover duration	Poot, et al (2014:167); Dawson, et al (2013:396); Kerr, et al (2011:347)
Interruptions occurring during the patient handover	
Lack of eye contact between the parties involved	
Lack of patient involvement	
No read back of information to exclude misunderstandings	
Factors related to patients, providers, teams, technology and structures	Cheung, et al (2009:4)
Lack of education related to teamwork and communication and lack of good role modelling	Kerr, et al (2011:343)
Lack of training of all healthcare professionals and emergency care practitioners in patient handover	Dawson, et al (2013:402); Farhan, et al (2012:1); Ye, et al (2007:439)
Factors that influence the effectiveness of patient handovers are: • Communication: Lack of clarity and incompleteness of verbal and written communication • Information: Incompleteness of information handed over and lack of a written document for later reference	Siemsen, et al (2012:445)

• Organisation: Unstructured nature of patient handovers leading to information loss; high workload of healthcare professionals leading to their ineffective listening • Infrastructure: Problematic infrastructure particularly relating to electronic patient handovers, for instance the use of multiple passwords to access patient records resulting in time being spent on clearing up ambiguities instead of taking care of patients and in non-retrieval of complete information • Professionalism: Unclear and inconsistent communication, unclear work procedures, lack of supportive structure and extreme workloads make safe patient handover difficult • Responsibility: Lack of taking over the patient responsibility handed over to the healthcare professional, resulting in the patient not being taken care of and being forgotten about • Team awareness: Lack of teamwork leading to interruptions in the continuity of patient care and patient handover • Culture: Lack of sharing a safe patient handover culture (i.e. the set standards, values and goals of a unit), resulting in inadequate patient handovers	
Repetition, lack of active listening by healthcare professionals, and multi-tasking	Bost, et al (2011:037); Jensen, et al (2013:966); Manser and Foster (2011:183); Owen, et al (2009:103)
The busy and hectic ED environment	Bost, et al (2011:037)

In Table 2.1 various factors have been listed that can influence patient handovers, leading to patient handovers being non-ideal and patient care being affected.

2.6 IDEAL VERSUS NON-IDEAL PATIENT HANDOVERS

Ideal patient handover lies at the heart of all good and effective patient care and teamwork (Jensen, et al 2013:967; Talbot and Bleetman 2007:539) and it can reduce errors and improve patient safety and outcomes (Gage 2013:44). The ideal patient handover is described by Bost, et al (2010:215) as a handover in which all of the patient's problems are clearly stated. Ideal patient handovers will prevent errors, reduce harm to the patient and ensure continuity of patient care regardless of the environment the patient is being treated in (Jorm, et al 2009:S109). Preparation for quality patient care and delivery of optimal patient care according to each patient's specific needs are dependent on an ideal patient handover (Calleja, et al 2011:5; Dawson, et al 2013:393; Priestly 2006:50). Gage (2013:43) states that an ideal patient handover can improve patient-centred care, but to achieve this kind of handover there has to be effective leadership as well as good communication of relevant information from one person to another.

Other authors also stress the importance of good inter-professional communication during patient handover to ensure patient safety, especially when the pre-hospital and in-hospital cultures meet in the ED (Delupis, et al 2015:67; Talbot and Bleetman 2007:539). An ideal patient handover is characterised by the provision of direction to staff, the enhancement of cost-effective patient care by preventing unnecessary tests and procedures and the continued delivery of high-quality patient care (Spooner, et al 2013:215). Farhan, et al (2012:1) express the view that patient handover in an ED is of the utmost importance for the safe and efficient transition of patient care from one person to another but that it is a difficult process as it is influenced by multiple factors. Bruce and Suserud (2005:204) are of the opinion that an ideal patient handover in the ED results in healthcare professionals being focussed on the patient because during such a handover problems are clearly stated and co-operation between the emergency care practitioners and healthcare professionals are enhanced, leading to increased patient satisfaction and continuity in patient care delivery. According to Sadri, Dacombe, Ieong, Daurka and De Souza (2014:37), the ability to achieve the ideal patient handover needs practice and that it should be

taught and developed by all involved in the process to avoid a non-ideal patient handover and its consequences.

Bost, et al (2010:215) and Bruce and Suserud (2005:205) describe a non-ideal patient handover as one that can occur when a patient's problems are complex and ambiguous. Kapadia and Addison (2012:119) as well as Calleja, et al (2011:13) explain that missing, incorrect or irrelevant information is characteristic of a non-ideal patient handover. A non-ideal patient handover compromises patient safety and disrupts continuity in patient care delivery. Not only does it lead to adverse effects for the patient but it also has a negative effect on the wellbeing of staff because the incompleteness or incorrectness of information handed over causes stress and frustration (Gage 2013:44).

Multiple literature sources provide evidence that non-ideal patient handovers can be prevented and that ideal patient handovers can be ensured if a structured approach to patient handover is followed (Gage 2013:48; Poot, et al 2014:167; Ye, et al 2007:439).

2.7 STRUCTURED VERSUS UNSTRUCTURED PATIENT HANDOVERS

As early as 1995, Caroline (1995:934) developed a structured set of guidelines for use by emergency care practitioners when handing over a patient they have managed in order to ensure the transfer of all-important information during this process. The use of structured patient handovers, enhanced by the use of mnemonics as patient handover tools, is recommended by Dawson, et al (2013:401), Jensen, et al (2013:966) and O'Keefe, et al (1998:679) for all patient handovers occurring in an ED.

Many tools have been developed to enhance the use of structured patient handovers in the ED, many of which are based on mnemonics. Examples of such tools used by emergency care practitioners when performing patient handovers are ISBAR

(introduction, situation, background, assessment and recommendation), MIST (mechanism of injury, illness/injuries, signs (observations) and treatment given) and SOAP (subjective data, objective data, assessment, plan) (Talbot and Bleetman 2007:539). Some researchers, for instance Poot, et al (2014:172) and Kapadia and Addison (2012:120) suggest the use of the SBAR mnemonic during the handover of medical patients. In the ED the most common mnemonic tool used for recording management, and sometimes also for patient handover, is the ABCDE (airway and C-spine, breathing, circulation, disability and environment) mnemonic. The use of the ABCDE mnemonic tool as a patient handover tool for use by doctors at shift change in an ED is suggested by Farhan, et al (2012:5) but the letters ABCDE referred to in this particular tool stand for the following: A – areas and allocation, B – beds, bugs and breaches, C – colleagues and consultants on call, D – deaths and disasters, and E – equipment and external events.

In South Africa the mnemonic tool MIST is also used by emergency care practitioners when handing over patients to healthcare professionals in the ED (Talbot and Bleetman 2007:539). The use of the P-VITAL process (present, vital signs, input and output, treatment and diagnosis, admission or discharge and legal issues) is another option for use in the ED and other hospital departments to structure patient handovers (Wilson 2011:23). The use of structured patient handover methods as a means of increasing retention of information after patient handovers is recommended by Wilson (2011:23) and Talbot and Bleetman (2007:539).

In observing structured patient handovers, Dean (2012:6) has found that structured approaches result in more information being provided by the emergency care practitioners in a shorter time, thereby improving time management during patient handover and enhancing attentive listening by healthcare professionals. Structured handovers make for content-intensive and purposeful patient handovers that improve continuity of care and reduce errors, thus preventing harm to patients (Brown and Sims 2014:50; Delupis, et al 2015:64; Jorm, et al 2009:S108; Kerr, et al 2011:343; Wilson 2011:26). Furthermore, structured approaches to patient handover can lead

to more simplified and streamlined clinical decision-making and these handovers can be used as educational tools to train new staff members (Spooner, et al 2013:219). According to Jensen, et al (2013:968), structured patient handovers in the ED is of the utmost importance in an emergency situation when life-threatening measures need to be implemented quickly. Gage (2013:48) has, however, found that no single approach to patient handover will be appropriate for all EDs, which might be the reason why no patient handover tool has been set internationally.

Unstructured patient handovers are said to lead to a lack of information being transferred during patient handover processes (Kerr, et al 2011:345). In addition, unstructured patient handovers lead to the provision of inconsistent information, increased handover time, fragmented patient handovers and the transfer of inaccurate information (Yong, et al 2008:150). Unstructured patient handovers can also make communication between healthcare professionals difficult (Cheung, et al 2009:4) and ultimately lead to the patient handover process being inconsistent and patient safety being compromised (Sadri, et al 2014:37).

Based on the evidence obtained from the literature, it can be said that because structured patient handovers have different advantages, such as ensuring safe, continuous patient care, they are recommended by multiple researchers for both verbal and written patient handover practices in different environments, for instance at the changes of shift and in the ED between emergency care practitioners and healthcare professionals (Farhan, et al 2012:2; Gage 2013:48; Jensen, et al 2013:966; Lawrence, et al 2008:257; McFetridge, et al 2007:267; Poot, et al 2014:167; Ye, et al 2007:439).

Since structured patient handovers are recommended for both verbal and written patient handovers it is necessary to make them part of the workplace culture in the ED.

2.8 TEAMWORK

Teamwork among multi-disciplinary teams providing care for multi-trauma patients is very important (Calleja, et al 2011:5). Communication processes used during patient handover from the pre-hospital to the in-hospital staff can serve as evidence of teamwork between these two settings (Chan, et al 2014:4). In a literature review done by Farhan, et al (2012:1) it became clear that patient handover not only involved the transfer of patient information but also increased team-building, teaching and group cohesion.

Improved communication might be achieved through standardising patient handovers between emergency care practitioners and healthcare professionals (Farhan, et al 2012:2; Gage 2013:48; Jensen, et al 2013:966; Lawrence, et al 2008:257; McFetridge, et al 2007:267; Poot, et al 2014:167; Ye, et al 2007:439). Improved communication is recommended as it can lead to improved relationships between these two professions and ultimately to improved teamwork and ideal patient handovers, which will ensure safe patient care delivery (Delupis, Pisanelli, Di Luccio, Kennedy, Tellini, Nenci, Guerrini, Pini and Gensini 2014:580).

2.9 SUMMARY

Patient handovers can be effected in multiple ways (see section 2.3) but, as has been pointed out, a verbal patient handover followed by a written record is the most preferred and accurate method. Patient handover is a valuable but risky activity occurring in multiple organisations between different categories of staff on a daily basis. Ideal patient handovers will lead to the delivery of safe patient care as well as the continuation of patient care delivery. In contrast, non-ideal patient handovers will lead to fragmented patient care delivery, adverse events and increased length of stay in hospital. Various factors can have an influence on the adequacy of patient handovers, but improving patient handover practices that occur from emergency care practitioners to healthcare professionals will lead to better patient outcomes.

Chapter 2 provided an in-depth discussion of existing literature that supports the background to the current study. In Chapter 3 the research design and methods used in the study will be discussed.

CHAPTER 3: RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

In Chapter 2 the literature review of the study was discussed in depth. Chapter 3 is dedicated to a discussion of the research methodology. The context where the study was conducted is described briefly, after which the research design and method that were followed in order to reach the aim of this study are discussed. Attention is given to aspects pertaining to the population, sampling method, data collection technique and data analysis method. The chapter also includes a discussion of ethical considerations and the principles adhered to so as to enhance the trustworthiness of the study.

3.2 SETTING

The study was conducted in a private hospital in Gauteng, South Africa that has a bed capacity of 267. Multi-disciplinary services are offered at the hospital, including general surgery, orthopaedic surgery, internal medicine and obstetric and gynaecological services. The different units in the hospital include a dedicated paediatric unit, a neonatal intensive care unit, general and cardiac thoracic intensive care units, cardiology units gynaecological and obstetrics unit, two medical wards, orthopaedic ward, surgical ward, oncology ward, day ward as well as a 24-hour emergency department (ED).

The ED consist of nine beds, which include two adult or paediatric resuscitation beds in the resuscitation room for the management of critically ill or injured patients, five beds in the general area used for the management of ill and injured patients, and two beds in the procedure room used for performing more invasive procedures on ill or injured patients. A triage room is located to the left of the entrance to the ED and is used to triage patients before they are admitted to the ED for the treatment and management of their problems or injuries.

Patients are triaged based on the severity of their injuries or problems and a triage system known as the South African Triage Scale (SATS) is used for this. Patients categorised as "red" are those presenting with very urgent signs and symptoms and needing immediate treatment. "Orange" category patients are those who have very urgent signs and symptoms and who should be treated within ten minutes of arrival, whereas "yellow" category patients are those with urgent signs and symptoms and who should be treated within one hour after arrival at the ED. "Green" category patients are those who present with non-urgent signs and symptoms and who need treatment within four hours after arriving at the ED (Cheema and Twomey 2012:7). According to the 2014 statistics of the relevant ED, approximately 1 202 patients of different triage categories are seen in the ED each month. Different ambulance services and emergency care practitioners bring in about 140 of these patients each month and hand them over to the healthcare professionals at the hospital (see Table 3.1).

Table 3.1: Summary of patients triaged (May to July 2014)

	May 2014	June 2014	July 2014
Total ambulance patients (inclusive of all categories)	118	138	140

Patients with various problems, some of which are undiagnosed, are admitted to the ED. The top ten causes of patients' problems are motor vehicle crashes, motorbike accidents, pedestrians run over by vehicles, trauma incidents (e.g. amputations, lacerations, abrasions, and puncture wounds), anaphylaxis, pneumonia, chronic obstructive pulmonary disease, gastroenteritis, influenza, and cardiac and respiratory arrest or problems.

3.3 RESEARCH DESIGN

As is the case with all organisational designs, research designs differ. The design selected will depend on the purpose of the research, the availability of data

previously collected on the topic, and the envisaged outcomes of the study (Malagon-Maldonado 2014:120).

Research design can be described as a blueprint for conducting a study and it assists the researcher in having better control over the outcome of the study's findings (Burns and Grove 2011:253). According to Creswell (2009:22), the research design comprises plans and procedures for research that start out from broad assumptions and that guide the researcher to methods of data collection and analysis. The design is selected based on the research problem, the researcher's experience and the target audience of the research. The design decided upon will be influenced by the researcher's worldview, data collection methods and analysis as well as data interpretation strategies. The three main types of research design are qualitative, quantitative and mixed methods. When planning a study, a researcher needs to decide on the philosophical worldview to adopt, the strategies to use that relate to the worldview, and the methods to use to obtain and analyse data (Creswell 2009:[23]). This interrelation is well illustrated by Creswell (2009:[24]) in the following diagram (see Figure 1).
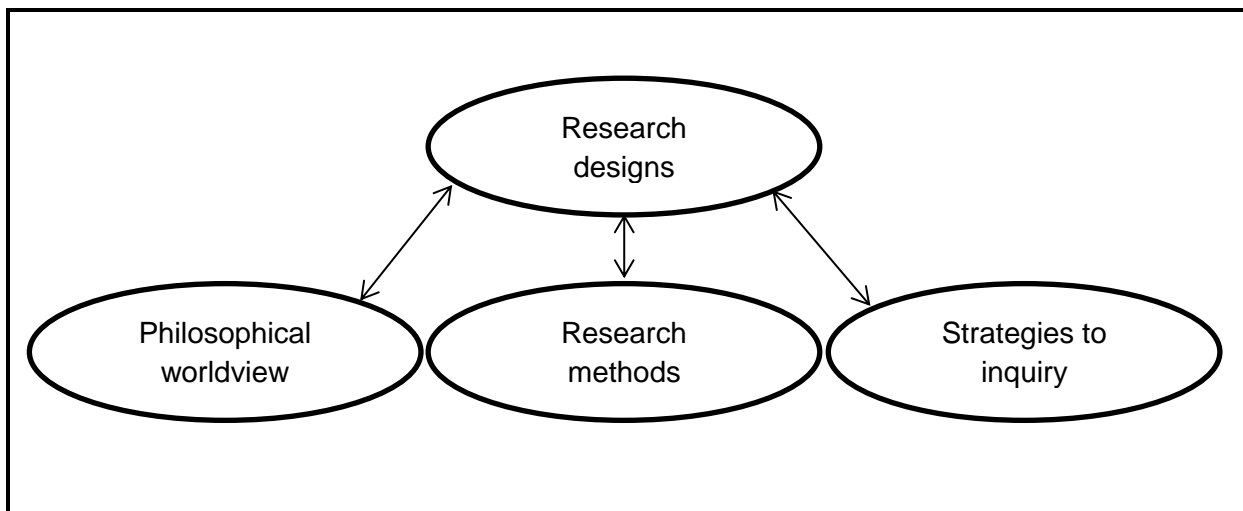

Figure 1: A framework for design – the interconnection of worldviews, strategies of inquiry and research methods
Source: Creswell (2009:24)

In this study, qualitative research was used. Qualitative research involves the exploration of subjective and holistic pathways to help develop a theory. This type of

research promotes the understanding of the unique nature of human beings (Ingham-Broomfield 2014:35). According to Malagon-Maldonado (2014:120), Marshall and Rossman (2011:3) and Turner, Balmer and Coverdale (2013:307), qualitative research can be defined as a social investigation into understanding people's interpretation of their environment, their work or how they receive care. This type of research aims to comprehend, describe and interpret phenomena as they are experienced by individuals, groups and cultures (Creswell 2009:22) and involves a description of research findings in the form of words (Creswell 2009:22).

Qualitative research also involves the in-depth investigation of phenomena by collecting rich data and utilising a flexible research design (Polit and Beck 2012:739). According to Marshall and Rossman (2011:3), there are various genres, ranging from naturalistic, interpretive, and critical to multiple-method enquiry. In qualitative research the aim is to describe and understand rather than to explain and predict human behaviour (Babbie, Mouton, Vorster and Prozesky 2010:53). Qualitative researchers believe they can reach a deeper understanding of a phenomenon by using the qualitative method rather than the quantitative method (Silverman 2010:123). Qualitative data scientifically explains events, people and matters affecting the data, and no numerical data is required (Fox and Bayat 2010:7). Qualitative researchers always try to investigate human interaction from an insider's perspective (Babbie, et al 2010:53), and it can also be said that qualitative research is used to explore human experiences through non-statistical methods. In the field of nursing, qualitative research can focus on the experiences of either patients or healthcare professionals without oversimplifying their experiences (Ingham-Broomfield 2014:35).

In qualitative research, human experiences and how these experiences are lived are investigated through collecting and analysing detailed data obtained in a natural setting and often over an extended period of time (Creswell 2009:22; Marshall and Rossman 2011:3; Polit and Beck 2012:14). During interaction between researchers and participants, data is generated and an understanding of participants' experiences is formulated by researchers. In the end, the general data collected is

analysed to provide a description of the participants' reality (Malagon-Maldonado 2014:121).

According to Malagon-Maldonado (2014:121) and Creswell (2009:[164]), qualitative research has some distinct features, such as a theoretical framework, that are not predetermined but are developed from data. Researchers should be sensitive to the context as generalisability to other settings may not be possible. Qualitative researchers usually immerse themselves in the environment they explore: they describe, analyse and interpret data using thick descriptions, with the researchers being the main instruments of data collection (Turner, et al 2013:307).

An advantage of qualitative research is that it is useful when little information is available on a subject, when there is little interest in the topic or when the researcher wants the perspective of the participants on a topic. This research method is also useful to explore change or conflict, and because of its versatility different professions can collaborate on conducting the research (Malagon-Maldonado 2014:120; Smith, Bekker and Cheater 2011:41). Of importance in the context of the current study is that it can be used to explore how care provided by healthcare professionals can be improved or how new knowledge on improving care delivery can be generated (Malagon-Maldonado 2014:121).

Other advantages of qualitative research include the opportunities it offers researchers in answering research questions by investigating phenomena that are unavailable elsewhere and collecting data as it is revealed through natural sequences (Silverman 2014:18). Furthermore, qualitative research can produce scientifically based theories, sampling methods and methods of analysis (Trotter 2012:398). In the context of the current study it is significant that qualitative research can add value to the quality of evidence-based practice and to the quality and safety of health care delivery (Schou, Hostrup, Lyngso, Larsen and Poulsen 2011:2086).

Qualitative research was used in this study because of the nature of the study. The method allowed the researcher to explore current patient handover practices

occurring in a natural setting by making use of participant observation of patient handover practices between emergency care practitioners and healthcare professionals in the ED. The interaction between emergency care practitioners and healthcare professionals was observed by the researcher and, at times, a co-observer, in that way generating data. The study can also be described as a collaborative approach between two different disciplines, in this case the pre-hospital environment and the ED environment.

During the research the researcher was the main data collector, which is usually the case in qualitative research studies. The researcher used an unstructured observation tool to document all findings made during the observed patient handovers. Thick descriptions of each patient handover were given, which enabled the researcher to obtain a deep understanding of current patient handover practices, an understanding that was much deeper than would have been obtained had numerical data been collected. Each patient handover observation occurred in the ED, the natural setting in which patient handovers occurred on a daily basis. As the patient handovers occurred naturally and were not staged, the researcher was able to obtain the best possible observational data in order to answer the research questions.

Through participant observation a deeper understanding of current patient handover practices was possible. Because the researcher also wanted the perspectives of the participants they were included in both the data collection (observation) and data analysis processes.

Once the researcher had decided on the research design that suited the research study best, the research method and process were decided on.

3.4 RESEARCH METHOD AND PROCESS

Research methods refer to the techniques a researcher uses to guide a study and gather and analyse information in order to answer the research question (Polit and

Beck 2012:12). The researcher's choice of research methodology will be determined by the nature of the research problem and the questions to be answered (Turner, et al 2013:302).

In this section, the research methods discussed relate to population, sampling method, data collection techniques and the method of data analysis.

3.4.1 Population

The population consists of a particular group of people or elements of interest to the researcher (Burns and Grove 2011; Polit and Beck 2012:273). In qualitative research the population can vary from one individual to groups of people and even to an institution, and these are referred to as participants (Ingham-Broomfield 2014:37). The population can be divided into the target population or the accessible population. The target population refers to all the cases that the researcher would like to generalise (Polit and Beck 2012:274), whereas the accessible population includes all the cases that fit the criteria and are accessible for the study. The target population can also refer to the entire set of people or elements that meet the sampling criteria but are not accessible to the researcher (Burns and Grove 2011). After deciding on the population, the researcher needs to establish criteria for deciding who will be included or excluded from the population. Inclusion criteria specify the characteristics the researcher wants to study, whereas exclusion criteria specify the qualities or criteria the researcher does not want to observe. These criteria provide a basis for including or excluding participants in the study population (Polit and Beck 2012:274). Various factors can be taken into consideration when a researcher determines inclusion criteria, for instance, cost constraints (money available versus expenditures), practical constraints (travelling and location), the ability of people to participate (medical conditions) and design considerations (type of research design) (Polit and Beck 2012:274). When there is a good match between the inclusion criteria and the population, validity of the study can be enhanced.

The population in this study included all the emergency care practitioners from the two selected ambulance services transporting patients to the selected ED and who

were involved in patient handover practices at the ED on a daily basis, as well as all of the healthcare professionals taking over patients from the emergency care practitioners in the selected ED. The two ambulance services were selected based on the numbers recorded in the selected hospital's documents of patients brought in on a monthly basis. By choosing the most regularly used ambulance services the researcher was enabled to observe as many different patient handovers as possible from two different perspectives (the perspective of the emergency care practitioners and the perspective of the healthcare professionals).

The inclusion criteria for the population were:

- Emergency care practitioners who were present in the ED and involved in patient handovers and who had consented to participate in the study. These participants could include advanced, intermediate and basic life support practitioners registered with the Health Professions Council of South Africa.
- Healthcare professionals who were present in the ED and involved in patient handovers and who had consented to participate in the study.

The only exclusion criteria identified for this study involved patient handover practices pertaining to patients brought in by emergency care practitioners and triaged as "red" category patients. These patients are critically ill or injured and require patient handover practices that tend to be more complex and that differ from the practices used for other categories of triaged patients.

The identified population served as the source for data sampling by means of a specific sampling method.

3.4.2 Sampling method

A sampling method is the process of selecting cases from the population that will be representative of the whole population. It can also be referred to as taking a sample from a subset of the population. When selecting the sampling method the researcher needs to take into account the research method, the individuals who will provide the necessary data and the setting in which the sampling will take place. The sampling

method should be well thought through (Marshall and Rossman 2011:105) and the researcher should decide whether to use a probability or a non-probability sampling method. In probability sampling, cases are selected randomly and all cases involved have a chance to be selected, whereas in non-probability sampling cases are selected through non-random methods (Polit and Beck 2012:275). In non-probability sampling, various methods can be used and one of these is convenience sampling, which involves utilising the people who are the most convenient to access and who will provide the researcher with the necessary data (Ingham-Broomfield 2014:37; Polit and Beck 2012:279). In qualitative research, convenience or purposive sampling methods are usually used to obtain information-rich data (Ingham-Broomfield 2014:37; Trotter 2012:399).

For this study the researcher decided on the convenience sampling method in order to collect the necessary data to answer the research questions. This method enabled the researcher to conduct observations at times that were convenient for both the researcher and the participants (co-observers). As it was impossible to know when and which ambulance service would arrive at the ED, convenience sampling was the best possible method to use. Patient handover practices occurring in the ED between emergency care practitioners and healthcare professionals were observed as they happened on a daily basis and when the observers were in the unit (hoping that they would be in the right place at the right time).

Prior arrangements were made with the ED that the observations would take place on agreed dates and at times that would be convenient for all observers. Care had to be taken that a co-observer would be available as the co-observer had to be off duty. Most of the observations were done by both the researcher and a co-observer in order to achieve the most accurate sample size.

According to Polit and Beck (2012:521), the sample size in qualitative studies, although usually small (Ingham-Broomfield 2014:37; Trotter 2012:399), is not fixed and should be based on the information needed. It is suggested that data is sampled until saturation is reached, in other words, up to a point where no new information is

obtained. In observational studies the observer will continue to observe until nothing new is observed through continued observation (Given 2008:4). Several factors can influence the sample size, for example, data quality, good informants (if their information is rich the sample size can be reduced) and the sensitivity of the topic (deeply personal topics might result in participants not disclosing all information, in which case more, longer and more intense observations are necessary to acquire more in-depth data) (Polit and Beck 2012:521). Baker (2006:182) indicates that the length of time spent on observation will depend on the research problem and on the researcher's involvement in the observation process. If a researcher is involved in the observation, not only can less time be spent on observations (as all relevant observations are made during each observation) but the sample size can also be reduced.

In this study the researcher acted as an observer and was, at times, assisted by a co-observer to ensure the in-depth observation of each patient handover. With the researcher acting as an observer, more in-depth data could be collected with each observation. Due to prolonged engagement, the researcher became familiar with the observation tool. To ensure a successful observation process, the researcher arranged a practice run with a more experienced observer and a supervisor who equipped her with the necessary skills to conduct in-depth observations. As a result the number of observations could be reduced as in-depth data was collected with each patient handover observation.

A further factor that made the decrease of the sample size and the achievement of quick data saturation possible was that the observer, and at times the co-observer, was not involved in the patient handover practice. As they merely observed the patient handover process they could give their full attention to the way it was done. Another advantage was that the researcher as observer and the co-observers knew what information to look out for and listen to, resulting in the correct information being documented from the start. The researcher herself is a healthcare professional, is known to the ED and is involved in the particular ED from time to

time, and the co-observers are also known in the ED as healthcare professionals and are familiar with patient handover practices.

Seventeen patient handovers were observed before data saturation was achieved. Thereafter another three patient handovers were observed to make sure data saturation had been achieved. Data saturation was achieved when the same observations were made during consecutive patient handover practices.

3.4.3 Data collection

Data collection refers to the process of collecting information in order to address the research problem (Polit and Beck 2012:725). One method of data collection in qualitative research includes observation (Ingham-Broomfield 2014:37). Qualitative researchers observe participants in their natural environments, performing their duties as they occur. This makes observation a good data collection method in qualitative research (Polit and Beck 2012:544).

Observation, one of the oldest data collection methods used, allows researchers to use all their senses in a systematic way in order to learn about phenomena (Given 2008:3). This method of collecting data originated in the late nineteenth and early twentieth centuries when anthropologists started collecting data first hand (Baker 2006:171).

Observation studies, according to Baker (2006:173) and Marshall and Rossman (2011:139), are studies in which participants' behaviour gets recorded systematically in a natural setting. Researchers listen to what participants say, question them and make observations over a period of time. By means of observation, researchers can discover complex interactions in natural settings (Marshall and Rossman 2016:143) because they attempt to capture real-life events as they happen instead of observing predetermined activities that they have developed themselves (Given 2008:3). During observation the researcher will enter the setting, get to know the people and get used to the routine, all the while using an observation tool to record activities and

interactions; therefore, it can be a complex process (Marshall and Rossman 2011:139; Marshall and Rossman 2016:143).

Observation can be a complex method that requires the researcher as observer to fulfil multiple roles at once and to utilise all of his or her senses when collecting data (Baker 2006:172; Marshall and Rossman 2011:139). Observers take an in-depth look at the event and the participants – they follow a descriptive method when collecting information, observing activities and recording occurrences as they happen. The data collected is usually recorded in the form of field notes during observation as well as after observation when it is reflected upon (Baker 2006:171; Creswell 2009:[168]; Given 2008:5).

Observation can be either overt or covert. In overt observation the researcher needs to disclose his or her presence to the participants for the purpose of the research, whereas in covert observation the researcher is able to capture the natural everyday behaviour of participants without their knowledge, which can in some situations be seen as being unethical (Ingham-Broomfield 2014:37). Both qualitative and quantitative researchers can utilise observation as a data collection method, although observation is central to qualitative research (Marshall and Rossman 2011:139). Qualitative researchers tend to prefer non-structured observation or participant observation (Given 2008:3), which enables them to gather more in-depth data when exploring a phenomenon.

Some of the strengths of the observation method relate to its effectiveness in exploring topics about which not much information is known and in discovering new information or validating existing knowledge (Given 2008:7). It also offers researchers the opportunity to directly observe and learn from their own experiences (Marshall and Rossman 2016:145) by enabling them to collect first-hand information from the participants and record the data as it occurs. In addition, the observation method can be used to explore unusual aspects and uncomfortable topics (Creswell 2009:[167]; Malagon-Maldonado 2014:127). Observation can be done anywhere an observer is present to observe the setting, making it a very flexible type of data

collection method (Babbie, et al 2010:294). These authors mention some more advantages of observation: it forces the observer to become familiar with the subject under investigation; it can reveal previously missed information; and more information than that mentioned by participants can be collected (for instance, by observing the workplace culture) (Babbie, et al 2010:295). Another advantage of observation is that it allows the researcher to study participants in their natural setting, which enables the researcher to gain a clearer and more realistic picture (Baker 2006:171).

On the other hand, observation has some weaknesses: it is time consuming; transferability can be a problem as observation is usually done in a specific context and the results cannot always be transferred in the same way to the next setting; the ability of the observer to conduct the observation can influence how data collection occurs; inexperienced observers might need more time to collect rich data and achievement of data saturation might be prolonged; observer bias can occur, influencing the trustworthiness of the data collected; and the researcher can be perceived as being intrusive, which might make participants reluctant to participate in the study or to provide all the information needed to achieve data saturation (Babbie, et al 2010:295; Creswell 2009:167; Given 2008:7; Malagon-Maldonado 2014:127). Furthermore, the ability of the researcher to remain detached from the participants and their activities during the observation process can be a problem because a close relationship can form between the researcher and the participants during the observation process (Baker 2006:172). A close relationship can lead to multiple ethical problems as far as the study is concerned, and the researcher will need to guard against these problems to ensure the trustworthiness of the data collected.

Babbie, et al (2010:293), Baker (2006:173–177), Creswell (2009:167) and Malagon-Maldonado (2014:128) identify four different roles assumed by researchers when using observation as a data collection process: 1) *the complete observer*: the researcher is present as a listener and observer but does not play an interactive role in the activities; 2) *the observer as a participant*: the researcher plays a more observational than participative role and the researcher can conduct short interviews

but remains research orientated; 3) *the participant as observer:* the researcher is more involved with the participants but still does not fully commit to their activities; and 4) *the complete participant:* the researcher is completely involved in the activities of the participants. Marshall and Rossman (2011:140) describe participant observation as the involvement of the researcher as both a participant and an observer to various degrees. By entering the field (a chosen setting) the researcher becomes involved, makes inquiries and gathers data first hand as he or she is able to hear, see and experience reality as the participants do (Marshall and Rossman 2016:145).

During observation, data can be collected in a structured or unstructured way (Malagon-Maldonado 2014:128). Furthermore, Creswell (2009:[166,168]) identifies semi-structured and unstructured observation, the former referring to the researcher deciding on some pre-set questions to which he or she requires answers, and the latter to the researcher documenting specific behaviours, actions and events. In structured observation, pre-developed protocols and instruments will give a clear indication what needs to be observed. The need to formulate systems for recording and categorising data is one of the weaknesses of structured observation (Polit and Beck 2012:313). According to Polit and Beck (2012:544), researchers can sometimes use unstructured observation to supplement self-reported data. By means of such unstructured observation the researcher can observe participants in their natural setting, record happenings as they occur and collect loose data. Unstructured observational data is usually collected through participant observation in the field; therefore, the researcher will not develop pre-set questions to which he or she needs answers (Polit and Beck 2012:544).

The data collection method used in this study was unstructured participant observation. Through the observation of patient handover practices in the ED (natural setting) as they occurred, the researcher was able to collect data on the practices for interpretation and for strategy development.

In unstructured participant observation the observers participate in the group activities while observing actions, asking questions and recording information, all within the natural setting. Prolonged periods of social interaction also occurs (Polit and Beck 2012:544). Given (2008:3) further describes participant observation as a way of gaining deep understanding of a particular topic through observation of individuals who live and experience it. Unstructured participant observation involves a variety of methods of observing behaviour, looking at the setting, conducting informal interviews and analysing documents. The roles the researcher can assume when performing these functions are: complete observer (involves no participation), participant as observer (involves participation of observer), observer as participant (involves more participation than observing) and complete participant (involves complete participation) (Given 2008:3). In this research, the role of participant as observer was applicable as the participants acted as co-observers, and the researcher observed patient handovers without participating in them. In order for unstructured participant observation to be successful, detailed information must be gathered, which necessitates prolonged engagement in the field (Given 2008:3). In this study, data was collected over a four-week period to ensure prolonged engagement in the field so as to gather the required detailed information on each patient handover. Having gathered detailed information, more in-depth data analysis could be done, no conclusions needed to be drawn, and only the facts as seen and observed could be stated.

When participants are used as co-researchers, participant involvement is promoted – participants can voice their opinions and can come to conclusions and realisations together with the researcher and give each other feedback. On the other hand, the researcher can use the experience and knowledge of the participants (Given 2008:3). The unstructured participant observation data collection method enables the researcher to ultimately come up with strategies involving participants, strategies (which might involve changes) that the participants will be more likely to accept as they participated in the process from the beginning.

In this study, unstructured participant observation was implemented in five phases as described by McCormack, et al in their Workplace Culture Critical Analysis Tool (WCCAT) (McCormack, et al 2009:30). The WCCAT was developed to assist researchers during observational studies aimed at changing practice. The five phases contained in the process of undertaking an observational study, analysing data, giving feedback and developing action plans are: 1) pre-observation, 2) observation, 3) consciousness-raising and problematisation, 4) reflection and critique, and 5) participatory analysis and action planning (McCormack, et al 2009:30). This method of data collection was decided upon in order to answer the research questions, namely: 1) What are the current patient handover practices through observation phases 1 to 4, and 2) what strategies can be implemented to improve current patient handover practices through phase 5. These phases and their applications are discussed in Sections 3.4.3.1 to 3.4.3.5.

3.4.3.1 Phase 1: Pre-observation

This phase consisted of two steps, which are discussed separately.

Step 1: Preparing the clinical area for observation

Due to the possibility of staff being anxious when observed, preparation of the clinical area and the staff is an important phase to reduce anxiety levels, clarify the processes and plan for observation times. This can be done through discussions held to clarify the processes, discussions on the ethical principles and ethical approval, explanation of the observation process (how, where, who and when), provision of written information about the study to the participants and answering the questions participants might have (McCormack, et al 2009:31–33).

In this study, preparing the clinical area for observation was done as follows: Ethics approval was obtained from the Faculty of Health Sciences of the relevant university, the hospital and the two selected ambulance services. Once ethics approval was granted, an information session to discuss the purpose of the study was held with the nursing manager and the medical doctor in charge of the ED as well as with the heads of the two groups of ambulance services. Once approval had been confirmed,

a session was held with the emergency care practitioners and the healthcare professionals to discuss the purpose of the study, hand out the participant information leaflet and obtain informed consent. The participants were given the opportunity to ask questions and clarify uncertainties. It was made clear that the observation process would at no time influence their work or routine, and emphasis was placed on the importance of their continuing with their normal everyday handover practices (workplace culture). Once the informed consent documents had been signed, the two ambulance services and the hospital were informed of the start of the observations. The researcher then proceeded to prepare herself and the participants for the observations.

Step 2: Preparing yourself to observe

In order to collect accurate information, an observer needs to have certain skills. These skills include: being able to concentrate in a busy environment, being able to remain detached from the context being observed, and being able not to make judgments about that which is being observed. It is very important to remain objective during the whole observation process. The way in which the observers were prepared included: practising, having group discussions, self-reflecting and learning from the past as suggested by McCormack, et al (2009:33).

In this study, the researcher selected a pre-identified co-observer (healthcare professional) prior to the observation process. The observers received the observation tool (see Annexure C) to familiarise themselves with its use beforehand. The dates and times of the observations were arranged in advance with the ED to ensure that co-observers would be available. However, sometimes these arrangements had to be changed owing to unforeseen circumstances, such as observers being sick and staff shortages being experienced. Emergency care practitioners were not involved as co-observers because staff shortages resulted in their not being available. A practice observation session was held prior to the first formal observation during which the observers familiarised themselves with the observation tool that was used, practised observing patient handover practice and clarified any uncertainties. The observers also visited the ED prior to the observation

in order to identify the best possible location from where the observation could be conducted and which provided an unobstructed view of the patient handover procedure without interfering with the daily work routine. The researcher identified a few possible locations depending on where the patient handover took place. However, these locations had to be changed from time to time depending on where the participants stood who were being observed and on whether the curtains were drawn closed or not. The observers made quite sure that they were able to hear and see each patient handover in order to collect the correct data. As the observers remained out of the way of staff involved in the patient handover practice at all times and as they never interfered or participated in any way it was possible to minimise the Hawthorne effect. To further prevent the Hawthorne effect the observers made sure that they were dressed in their uniforms as usual. The Hawthorne effect is known as the constant awareness that participants have of being studied and the possible impact it can have on their behaviour (Yong, et al 2008:267)

After completing the preparations mentioned above, each observer prepared adequately for the observations to be done.

3.4.3.2 Phase 2: Observation

This phase is conducted by two observers (observer-researcher and co-observer-healthcare professional) at an agreed time. These observers must make their own field notes for use afterwards and to ensure effective observation (McCormack, et al 2009:33). During the observation both observers must make sure that they are strategically placed in order to have the best possible "view" without being highly visible or in the way. In the beginning observations might take long and the observers might find they can only observe practice for 15 to 20 minutes at a time owing to the intense concentration needed. However, as time goes by and observers get more proficient, observation time can be reduced (McCormack, et al 2009:34). During observation the observers must try to capture as much data as possible and to make clear and concise notes (McCormack, et al 2009:34).

In this study, most patient handovers were observed by the researcher and a co-observer (healthcare professional) on the arranged date and time. Unfortunately, unforeseen circumstances made it impossible for each patient handover to be observed by two observers – in some cases the observations had to be done by the researcher alone. All information on the patient handover observed was recorded in the observation tool (See Annexure C1). This observation tool was used to assist the two observers to collect the correct data needed and to speed up the observation process. The researcher and the co-observer each had their own observation tool that assisted and guided them regarding what to observe and what to look out for. Each observer recorded their observations pertaining to the patient handover in the observation tool and used thick descriptions for each observation. A total of 20 patient handovers was observed in the ED.

During the observation process all the observations made must be recorded in writing. These records are often referred to as field notes, which are detailed, non-judgmental and concrete descriptions of what has happened as observed by the observer (Marshall and Rossman 2011:139; Marshall and Rossman 2016:143). Babbie, et al (2010:294) stress the importance of taking full and accurate notes of what exactly transpires. The ideal method would be for the observer to take notes while observing, but if this is not possible the observations must be documented as soon as possible afterwards. Using a standard recording form can assist the researcher/observer in making notes during the observation session, can make the recording process faster and more efficient and can assist the observer in knowing what to observe and look out for during observation. It is important that this recording should be done unobtrusively as participants are likely to change their behaviour once they become aware that an observer is taking notes. During observation the observer needs to record thick, descriptive notes (Malagon-Maldonado 2014:128).

In the current study, the observation of patient handovers was done in a location in the ED where the observers were out of the way of staff members and from where the patient handovers were clearly visible and audible to both observers. At no time

were the observers involved in the patient handover process, and each patient handover was observed from start to finish.

In order to obtain a clear picture of the patient handover practices in the ED, both the researcher and a co-observer (healthcare professional) observed patient handovers at different times and on different days during the week and over weekends. Table 3.2 includes a summary of the patient handovers observed per day, observers involved, the duration of the observation time per day as well as the amount of patient handovers which were observed.

Table 3.2: Summary of patient handovers observed

Date	Time	Observers		Number of handovers observed
		Researcher	Co-observer	
8/09/2015	08:00 – 14:00	Yes	Yes	2
14/09/2015	08:00 – 16:00	Yes	Yes	3
16/09/2015	08:00 – 16:00	Yes	No	2
17/09/2015	08:00 – 16:00	Yes	No	1
18/09/2015	13:00 – 19:00	Yes	No	2
22/09/2015	19:00 – 02:00	Yes	No	2
23/09/2015	19:00 – 02:00	Yes	No	1
7/10/2015	08:00 – 16:00	Yes	No	1
17/10/2015	08:00 – 16:00	Yes	Yes	2
22/10/2015	08:00 – 16:00	Yes	Yes	1
26/10/2015	08:00 – 16:00	Yes	Yes	3

3.4.3.3 Phase 3: Consciousness-raising and problematisation

Once the observation is finished, the observer must clear up any uncertainties with the participant and the co-observer. Open questions should be asked by the observer in order to understand the practice observed and to prevent making any false assumptions (McCormack, et al 2009:35–36).

In this study, the researcher clarified all uncertainties with the co-observer directly after every observation so as to gain a deep understanding of the observed data when a second observer was present. In order to clarify the uncertainties with the participants, the researcher asked the participants involved in the patient handover practices open-ended questions. That ensured that sufficient, concise and accurate knowledge had been gained with regard to current patient handover practices in the selected ED. It also ensured that no assumptions had been made by the researcher and/or the co-observer. All responses to the questions were noted in the observation tool (see Annexure C1).

3.4.3.4 Phase 4: Reflection and critique

Both observers must compare their observations and decide what information to give feedback on. During the feedback sessions with the staff, critical dialogue needs to be facilitated and each session observed needs to be discussed. At the end of the discussion a common set of issues must be agreed upon between the clinical staff and the observers. These issues will form the basis for conducting further investigations, formulating a personnel development action plan and developing a staff development plan (McCormack, et al 2009:36).

On an agreed date and at an agreed time observers and the clinical team must meet in a quiet area with the express purpose of collectively making sense of the data collected. Feedback must be given in the form of positive-negative-positive comments. Members of staff need to feel that the information provided will help improve practice (McCormack, et al 2009:37).

In this study, the reflection and critique phase followed after the participatory data analysis phase (see Section 3.4.3.5). For the purpose of giving feedback, a session was pre-arranged between the researcher and the participants to make sure that as many participants as possible could attend the session. Participants were given the opportunity to read through all the observation notes, to reflect on them and to discuss their ideas, after which the participants and the researcher formulated a set

of problems based on the collected data. Through this session staff became more aware of the challenges of patient handovers and they started thinking of ways to improve patient handovers. This was followed up by a strategic planning session, which is discussed in detail next.

3.4.3.5 Phase 5: Participatory data analysis and strategy planning

After collecting all the data during phases 2 to 4 it is time to analyse and understand the collected information. Data analysis refers to the process of interpreting a collected text or image and making sense of it. This is an ongoing process in qualitative research as the researcher interprets data as it is being collected (Creswell 2009:[171]).

The data analysis phase should be conducted in collaboration with the participants. Ideally, as many participants as possible must be part of the data analysis process and during this process they should be asked to formulate metaphors, feelings and impressions that reflect the collected data so as to assist in getting an in-depth impression of the data collected. A list is then drawn up of the common themes and issues identified by the participants during the analysis of the data (McCormack et al, 2009:38).

In this study, all the emergency care practitioners and healthcare professionals involved were formally invited to analyse the data collaboratively. After having sent out the invitations the researcher continuously followed up on who would be attending the data analysis session in an endeavour to get as many of the participants as possible to take part. Unfortunately not many of them were able to attend the data analysis session owing to staff shortages, but those who did made a big contribution. On the day of data analysis they were given an explanation of how the process would work. All the participants also signed an informed consent form for photos to be taken during the data analysis process.

The creative hermeneutic data analysis method and the steps (see below) as suggested by Boomer and McCormack (2010:644) were used in this research study to analyse the data:

Step 1: This step involves the clarification of the data collected by means of the observation tool of all the observations conducted during patient handovers in the ED. In this study, the researcher and participants took part in the clarification process to ensure there were no misinterpretations.

Step 2: During this step the researcher and the participants do their own readings of all the observational data. Each participant is asked to form general impressions, observations, thoughts and feelings pertaining to the observational data. In this research, the researcher and the participants individually read through all the observational data and formed their own general impressions, observations, thoughts and feelings pertaining to the observational data.

Step 3: Each participant creates a visual image that captures the core idea of what they have read, and this step was followed in this research.

Step 4: During this step, each participant tells a co-participant the story of his or her picture, and the co-participant listens attentively and writes down the main ideas. This process may create an opportunity to raise awareness among the participants regarding their current patient handover practices. In this research, each participant told a co-participant the story of his or her image, which helped raise awareness among the participants regarding their current patient handover practices. From these pictures and stories the participants developed general themes (see Step 5), which were written on pieces of paper.

Step 5: Using the creative image as a centrepiece as well as the captured story, the participants develop themes and write each theme on a piece of paper. In this study, the participants developed general themes from the pictures and stories. Each theme was then written on a piece of paper.

Step 6: During this step, smaller groups are formed and participants are asked to discuss their themes and create shared themes that everybody agrees on. This step was followed in the current research study.

Step 7: Every participant presents one or more of the identified themes to the entire group for discussion and consensus is reached on the final themes (and categories). In this research, the groups shared their themes with the entire group who discussed them and reached consensus on the final themes.

Step 8: After selection of the final themes each participant is asked to do a final check on the themes (and categories) to ensure that the entire group agrees with the findings. The themes are then displayed visibly and strategies are developed. In this research, a final check on all the themes was done and consensus was reached by the entire group. The themes were then displayed for all to see so that strategies could be identified.

Step 9: Once consensus on all the themes has been reached, each participant notes down three strategies on separate sticky notes that can be implemented to improve patient handover practices. The participants are each given a chance to display their strategies under the applicable themes their strategies aim to address. In this research, all the aspects of this step were followed.

On completion of the steps discussed above, the final themes and strategies were showcased on an A3 sheet of paper and photographed.

The original A3 display was left in the possession of the ED for implementation by emergency care practitioners and healthcare professionals to improve the current patient handover practices in the future.

3.5 TRUSTWORTHINESS

The trustworthiness of the data collected and interpreted in research is of great importance. Trustworthiness measures the amount of confidence that researchers have in their qualitative research, and the measure of trustworthiness is evident in the evaluation of the quality of the research study (Polit and Beck 2012:157,745). Furthermore, trustworthiness can be described according to the criteria used by qualitative researchers to measure reliability and validity (Fox and Bayat 2010:107). In qualitative research it can be difficult to achieve trustworthiness, and researchers will, therefore, implement multiple strategies to ensure this. The different strategies, based on the model developed by Lincoln and Guba, include: credibility, dependability, confirmability and transferability (Cope 2014:89; Houghton, Casey, Shaw and Murphy 2013:13; Marshall and Rossman 2011:40; Polit and Beck 2012:584; Umeokafor 2015:54).

Credibility refers to the confidence a researcher has in the truth of the data collected and in the interpretation thereof (Polit and Beck 2012:585). Credibility will ensure that a phenomenon is described accurately (De Vos, Strydom, Fouche and Delport 2011:419). The research will be classified as being credible if that which has been collected is in accordance with the researcher's interpretation (Munn, Porritt, Lockwood, Aromataris and Pearson 2014:3; Silverman 2014:85).

According to the Lincoln and Guba model there are two ways to ensure credibility of qualitative research findings: first, data must be collected in a credible and believable manner and second, steps must be taken when writing the research report to show that the results are credible (Polit and Beck 2012:585). Another method to ensure credibility is through the prolonged engagement of the researcher in the field during

data collection. It is important that the researcher must spend enough time collecting and interpreting in-depth the data to avoid any misunderstandings. Prolonged engagement will also result in establishing a better relationship between the researcher and the participants, resulting in the participants being more at ease and providing the researcher with more information (Cope 2014:89; Houghton, et al 2013:13; Marshall and Rossman 2011:44; Polit and Beck 2012:589). Cope (2014:89), Fox and Bayat (2010:107) and Marshall and Rossman (2011:44) mention that member checking is another form of ensuring credibility – the information gathered is checked with the participants to ensure that the researcher is interpreting the data correctly. Cope (2014:89) regards the keeping of dense audit trails as another method of ensuring the credibility of the research because they can be used to prevent the misinterpretation of data when writing the research report.

As far as observational studies are concerned, Silverman (2014:85) suggests that credibility can be increased if observers keep four sets of notes of the observations conducted: 1) short notes made during the observation, 2) expanded notes made as soon as possible after each observation session, 3) a journal of all problems or ideas arising during the observation and 4) a record of data analysis and interpretation during data collection. Field notes can increase the density of the audit trail to improve credibility.

In this research, credibility was ensured through several means, the first being through prolonged engagement: the researcher had been involved in the ED for a period of five years and had come to know the participants. Furthermore, the researcher spent four weeks in the ED gathering data while observing patient handovers, at times working together with a co-observer. During the data collection process the researcher as observer never got the impression that the emergency care practitioners or healthcare professionals were uncomfortable with being observed. Secondly, the observation tool guided the observers on what to observe regarding each patient handover, which resulted in both observers collecting similar data, being assisted in collecting the correct information from the start and having a means of documenting information during and immediately after each observation. Thirdly, dense descriptions of each patient handover observed were recorded,

enabling the researcher to interpret true and correct information as observed and not as constructed. Most observations were conducted by more than one observer on more than one occasion and at different times where possible, which led to the collection of richer and more descriptive data. When one observer missed something the other one picked it up. Data was also collected during weekdays and weekends, which gave the researcher a clear indication if any changes occurred in patient handovers when the day or the time differed. Fourthly, the researcher and the co-observer (when present) clarified any unclear or uncertain information with the participants directly after each observation session before they left to ensure that there were no misinterpretations and that no conclusions had been drawn by the observers.

The researcher also ensured credibility by making use of member checking. Observers were given the chance to discuss and identify anything missed by one of them and to reflect back on the observation and make more detailed notes. Lastly, during the hermeneutic data analysis of the data collected the researcher gave feedback to the participants on the data collected. Each participant had an opportunity to look at the information collected as recorded in the completed observation tools, after which they decided on the general and the more specific themes. This allowed for member checking at the same time.

Dependability means ensuring reliability of data over a period of time even under changing conditions and ensuring that evidence will remain constant and stable (Polit and Beck 2012:175,585). A researcher must make sure that the research process remains the same throughout the study (De Vos, et al 2011:420). This can be achieved by ensuring that the right research processes are used (for example, the method must allow the research question to be answered) and that they are well documented and described throughout the research (Munn, et al 2014:3). According to Cope (2014:89), dependability in qualitative research can be tested by comparing the results of similar research carried out concurrently by different researchers. If similar results are obtained from similar research conducted with similar participants under similar conditions the research can be described as being dependable.

Dependability might be difficult to achieve during observational studies because of the possible occurrence of the Hawthorne effect. The Hawthorne effect is known as the constant awareness that participants have of being studied and the possible impact it can have on their behaviour (Yong, et al 2008:267). It is thought that participants can change their behaviour once they become aware that they are being watched (Fernald, Coombs, DeAlleaume, West and Parnes 2012:83). This effect was first observed during research done in the 1920s and 1930s in which it was found that workers' productivity increased when they were continuously observed by their managers (Fernald, et al 2012:83; Haessler 2014:965; Schwartz, Fischhoff, Krishnamurti and Sowell 2013:15242). This finding gave rise to a lot of controversy about the nature of the Hawthorne effect. According to McCambridge, Witton and Elbourne (2014:268) and Haessler (2014:965), one of the possible reasons why people change their behaviour is because of their wish to conform to the expectations of others. The Hawthorne effect has been observed in various areas ranging from education to medicine and even in processes such as voting. Although mixed evidence was collected it was studied nonetheless (Schwartz, et al 2013:15242) and it was noted that observational studies were prone to the occurrence of the Hawthorne effect.

During observation, data should be collected as unobtrusively as possible as people are likely to behave differently when they see people taking notes (Babbie and Mouton 2010:294) and as observational studies are more prone to the Hawthorne effect (Fernald, et al 2012:83). However, Haessler (2014:966) have found that this effect is sometimes overestimated – after a while participants get used to the observer, get involved in their environment again and return to their old ways. In another research studies (conducted by Yong, et al (2008:154) it was found that observation did not change the participants' behaviour much and when it did it led to an improvement in the patient handover process. According to McCambridge, et al (2014:277), it has been found in six observational studies that the Hawthorne effect does occur in health science settings, but that it usually results in improved patient care. Schwartz, et al (2013:15244) reported that the Hawthorne effect has also been observed in research involving a group of participants who was continuously made

aware of their participation in the research. Here the awareness created also had a positive outcome on the participants. Most human beings alter their behaviour because they aim to please, but it is usually of short duration; therefore, the Hawthorne effect does not have a lasting effect on human behaviour (Haessler 2014:966).

On the other hand, Fernald, et al (2012:83) did not find any evidence of the Hawthorne effect in research involving the observation of clinicians. Although the observer's presence was known to the participants, there was no difference between the behaviour of the observed group and the behaviour of the non-observed group.

During this research study the researcher and co-observers were also continuously on the lookout for any evidence of the Hawthorne effect during the observation of patient handovers. Methods that the researcher implemented to prevent the occurrence of the Hawthorne effect included the following:

- During the pre-observation phase of data collection a meeting was held with all the participants involved where the researcher asked participants to continue with their usual patient handover practices and not to alter them once they became aware of being observed.

- The location in the ED where the researcher and occasionally the co-observer situated themselves was such that they were not too visible and they did not interfere with the patient handover process, which minimised the possibility of staff being aware of them all the time.

- The researcher and co-observer were not part of the patient handover, which also minimised staff awareness of their presence.

- The researcher and co-observer were dressed in uniform during the observation sessions, which made them appear to be part of the staff and did not cause them to stand out as observers.

- The current study confirmed the finding of Haessler (2014:966) that participants soon get involved in their environment and get used to the observer. The researcher and co-observers continued with their observations and after a few

observations participants went back to their usual way of conducting patient handovers.

The Hawthorne effect was possibly observed in one of the patient handover practices when one person, who was observed twice in one day by the same observers and became aware of being observed, changed the way he/she conducted the second patient handover. In all the other patient handover practices the participants greeted the researcher and the co-observer (if present), which suggested that they were aware of the observer(s); yet no change was noted in their behaviour during the patient handover practices. After one observation the participant approached the researcher and asked questions about the research, which indicated that the participant had been aware of the researcher; yet no change in handover practice had been evident.

Confirmability refers to the objectivity of a researcher. A researcher must ensure that the data collected and interpreted is not influenced by the researcher and that the information provided by the participants is documented. It is important that the data must be free from researcher's biases (Cope 2014:89; Polit and Beck 2012:585,175). If a researcher is biased it can influence his or her ability to provide the full truth about the data collected. When planning a research study a researcher must eliminate the factors that can give rise to bias. However, bias can never be totally prevented and sometimes it will only affect a portion of the results (Marshall and Rossman 2011:253; Polit and Beck 2012:176).

One of the methods qualitative researchers often use to prevent bias is triangulation. Triangulation refers to the utilisation of multiple sources of information, thereby counteracting bias should it occur (Fox and Bayat 2010:107; Polit and Beck 2012:176). Another method of dealing with bias is for the researcher to acknowledge the possibility that it can occur during the research (Noble and Smith 2015:34).

In this research, confirmability was ensured by preventing observer bias. Observer bias is one aspect that can influence trustworthiness when conducting observational

studies as the researcher will have some idea of what to look out and listen for. The observers involved in this research were from the selected ED. To prevent observer bias the observers received training in using the observation tool to make sure that their observation was guided by the pre-determined tool (in conformance with the suggestions made by Yong, et al 2008:154) and that they were prevented from drawing their own conclusions. During the information session the observers were made aware of the possibility of observer bias and they were reminded to guard against it. Only what was observed was documented in each observation tool. The use of multiple observers made the triangulation of information and the confirmability of the data collected possible. During the data analysis phase, confirmability was further ensured when participants started acknowledging that what had been observed was a reflection of how they usually behaved and what they usually said and did.

Transferability relates to the extent to which the collected data can be transferred to other contexts and to whether the data is descriptive enough to be used in other contexts (Cope 2014:89; Houghton, et al 2013:16; Marshall and Rossman 2011:252; Polit and Beck 2012:585). The responsibility of transferability lies more with the second researcher who wants to use the information than with the first researcher who conducts the research. In qualitative research, transferability can be a problem as it is difficult to transfer and to generalise information to other settings and populations as all populations and their characteristics differ (Marshall and Rossman 2011:252). However, transferability is achieved if the results can be applied to other settings and if others not involved in the research can find the use of these results valuable. It is also important to note that transferability will only be achieved if it was the intent of the researcher to make the information generalisable (Cope 2014:89). Transferability was not intended in this research as the study was contextual in nature and focussed on raising awareness of current patient handover practices in a selected ED.

3.6 ETHICAL CONSIDERATIONS

The researcher obtained ethical permission from the ethical committee of the Faculty of Health Sciences of the relevant university as well as from the selected hospital and the two selected ambulance service providers before data collection started, after which informed consent was obtained from all the participants willing to participate.

All research done should be based on mutual trust and cooperation and on acceptance of the expectations of the researcher and the participants. Participants enter into a special relationship with researchers, and care should be taken that participants are not exploited for the benefit of the research (Polit and Beck 2012:153). Because humans are the participants or sometimes the objects of study in qualitative research, ethical problems can arise (De Vos, et al 2011:113).

Ethics refer to the obligations the researcher has towards the research participants (Polit and Beck 2012:727). According to De Vos, et al (2011:114), ethics can be defined as a set of moral principles accepted by an individual or a group and consists of the rules and behaviour expectations relating to subjects, respondents, participants, assistants and students. These principles provide researchers with standards to evaluate their own conduct.

Care should be taken to protect the rights of humans as participants in research studies (Polit and Beck 2012:150). Based on various studies conducted in the past a code of ethics was developed that researchers must follow when conducting research. Most disciplines, for instance, sociology, psychology and medicine, have established their own codes of ethics (Creswell 2009:93; Polit and Beck 2012:151).

In 1964 the World Medical Association released the Declaration of Helsinki that set out the ethical principles related to medical research involving humans as subjects. In response, the National Commission for the Protection of Human Subjects in Biomedical and Behavioural Research developed the Belmont Report in 1979 which up to today guides review boards on ethical decision-making. Three core principles are contained in the Belmont Report: 1) Respect for human dignity 2) Beneficence and 3) Justice (Hennink, Hutter and Bailey 2011:62–63; Polit and Beck 2012:151).

Owing to the nature of qualitative research more ethical challenges usually occur than in quantitative research. This can be ascribed to the close and sometimes intimate relationships that develop between a researcher and participants because of the in-depth investigation into the beliefs and feelings of people (Hennink, et al 2011:64). Certain procedures need to be complied to prevent any ethical violations (Polit and Beck 2012:152). When reporting findings the researcher should take care not to compromise the participants' privacy and security. Sometimes qualitative research investigates sensitive subjects such as sexuality and violence, and the researcher should very carefully maintain confidentiality of all the information received (Hennink, et al 2011:64). However, maintaining ethical principles should be a researcher's priority regardless of the type of topic under investigation.

The principle of beneficence requires the researcher to prevent harm to the participants and to maximise the benefits of the research to the participants, but the benefits should never overshadow the possible harm (De Vos, et al 2011:116; Fox and Bayat 2010:148; Hennink, et al 2011:67; Polit and Beck 2012:152). Harm can include physical, emotional, social or even financial harm, and the researcher needs to prevent any type of harm to participants even if it is only temporary. Qualitative researchers must be vigilant in anticipating ethical problems and take great care to prevent any harm, but particularly psychological harm, to participants (Polit and Beck 2012:153).

Marshall and Rossman (2011:142) suggest that participant observation and observational studies should be mutually beneficial to the researcher and the participants and that this must be considered before the research commences and must be re-evaluated during the study. Furthermore, Polit and Beck (2012:156) suggest that researchers should draw up a risk-benefit assessment to determine the possible risks and benefits involved in the study and that they should share this assessment with the participants to assist them in making a decision to participate or not. Such an assessment will also assist the researcher in determining the risks involved and in planning to prevent them. Researchers doing qualitative studies might find it difficult to predict possible risks at the beginning of the study;

nevertheless they should remain cautious and identify any risks that might develop during the course of the study.

Before commencing with this research, the researcher informed the participants of the research during an information session. The purpose, possible benefits and possible harmful effects were also discussed with the participants and they were given the opportunity to ask any questions. Furthermore, the researcher provided them with a copy of the proposal document in case they required more information related to the study. The only benefit the participants could reap from the study was the possible improvement of patient handover practices once strategies to achieve this had been identified. Participants were also informed of the commencement date of the study so that they would not be caught off guard when they saw the observers in the ED. Each participant was provided with a participant information leaflet (see Annexure B) containing all the information discussed, which they could read through at their leisure afterwards. The researcher continuously watched out for any possible forms of harm that might develop during the observation process, and none was observed or reported by participants.

The principle of respect for human dignity includes the right to self-determination and the right to full disclosure. This principle implies that participants can voluntarily decide to be part of the research or not, can ask the researcher questions and can withdraw from the study at any time. The participants can also not be coerced into participating by being threatened should he or she not take part. Thus the researcher has the responsibility to provide participants with full information on the research and their right to participate or not (De Vos, et al 2011:116; Fox and Bayat 2010:148; Hennink, et al 2011:63; Polit and Beck 2012:154). All participants need to be treated with courtesy and respect (Hennink, et al 2011:63). Marshall and Rossman (2016:146) regard the aforementioned requirement as one of the ethical problems that can arise during participant observation. It remains the responsibility of the researcher to ensure that participants are aware of the study being conducted and of their right to be willing or unwilling to participate. In acceptance of this responsibility the researcher must obtain the informed consent of all the participants and must

continuously re-confirm their informed consent (Hennink, et al 2011:63; Marshall and Rossman 2016:146; Polit and Beck 2012:154).

Polit and Beck (2012:157), De Vos, et al (2011:117) and Fox and Bayat (2010:148) describe the obtaining of informed consent as an important principle in protecting participants involved in research studies. When obtaining informed consent the researcher needs to ensure that participants have all the required information and that they understand it before making an informed decision to sign or refuse to sign the consent form. At the beginning of a qualitative research study a researcher is not always sure about all aspects of the study, for instance the possible harm, benefits and time frames, which can make it difficult for the researcher to provide participants with all the information before obtaining consent. Each participant must sign an informed consent form and the researcher must keep a copy of each signed form.

As far as observational research is concerned, informed consent involves informing the participants of the purpose of the research to enable them to make an informed decision about whether to participate or not (Vogt, Gardner and Haeffele 2012:282). In the case of overt participant observations informed consent must be obtained prior to the observations (Vogt, et al 2012:284).

Written informed consent was obtained from the participants in the current research study during the information session when the participants were also given an information leaflet. Participation was voluntary and the participants had the opportunity prior to the commencement of the research to choose whether or not to participate. It was explained to them that they could withdraw their consent to participate at any time during the study without any negative consequences. Although none of the participants refused to participate in the study, it was stated that only those participants who had given consent would be observed by the observers during the observation sessions and that all had a chance to be co-observers. The participant information leaflet contained all the information given to the participants during the information session so that they could refer back to it at any time. Copies of all the signed informed consent forms were kept by the researcher.

The principle of justice refers to the right of participants to be treated fairly and to have their privacy respected. Participant selection should be based on the requirements of the study and not on a specific group's vulnerability making them easier targets to agree to participate (Polit and Beck 2012:155). All research procedures should be conducted in a fair, non-exploitive and well-considered manner (Hennink, et al 2011:63). The researcher must treat all data collected with the strictest confidentiality (Hennink, et al 2011:63; Polit and Beck 2012:156). According to Polit and Beck (2012:162) and Fox and Bayat (2010:148), the most secure way of ensuring confidentiality is through anonymity to ensure that the participants cannot be linked to their data. Should anonymity not be possible, all measures available to ensure that all information is treated confidentially should be implemented. In qualitative research it is difficult to ensure anonymity because of the close relationship between the researcher and the participants, therefore confidentiality must be maintained.

According to Vogt, et al (2012:295), field notes in observational research will protect the participants' privacy better than video or audio recordings.

In this research all the measures available to ensure privacy and confidentiality were implemented. Patients were not observed during the observation of patient handovers and, as no patient information was written down, no patient consent was needed. The observation information of each patient handover was documented in the observation tool without writing down the names of the participants involved or the organisation they represented. To ensure privacy only the ranks of the participants involved were written down. Making notes in the observation tool instead of making audio or video recordings also ensured the best privacy. The name of the hospital or of the ambulance service involved was not mentioned in any documents or reports.

Should a researcher fail to observe these ethical principles when conducting research and should a conflict arise between the rights of the participants and the

demands of the study, the researcher will be faced with an ethical dilemma (Polit and Beck 2012:151).

3.7 SUMMARY

Chapter 3 presented an in-depth discussion of the research design, the methods and the data analysis process applicable to this study. In conclusion the trustworthiness and the ethical considerations related to the study were discussed.

In Chapter 4 the research findings are discussed in depth and the discussion is supported by references to applicable literature.

CHAPTER 4: RESEARCH FINDINGS AND DISCUSSION

4.1 INTRODUCTION

In Chapter 3 an in-depth discussion was presented on the research design and methods. Chapter 4 contains a detailed overview of the research findings supported by a discussion using existing literature.

4.2 RESEARCH FINDINGS

A data analysis session using the hermeneutic data analysis method (see Chapter 3, Section 3.4.3.5) was held on 10 November 2015. The researcher and research participants participated in the data analysis session. Eight participants participated in the data analysis session of which two were emergency care practitioners and six were professional nurses. Despite being invited no doctors, enrolled nurse or auxiliary nurse attended the data analysis session. Themes, sub-themes, categories and sub-categories as well as strategies for implementation to improve patient handovers were identified.

From the data, one overarching theme, namely that of communication, was identified. It was decided by all present that communication encapsulated the rest of the sub-themes and, therefore, should be seen as the overarching theme. Four other sub-themes that supported the research findings together with the categories and subcategories under each theme were also identified. The four sub-themes were:

- Sub-theme 1: Disrespect
- Sub-theme 2: Environment
- Sub-theme 3: Handover
- Sub-theme 4: Confidentiality

A summary of the overarching theme, the four sub-themes, and the categories and subcategories is provided in Table 4.1.

Table 4.1: Summary of the overarching theme, sub-themes, categories and sub-categories

Theme	Sub-theme	Categories	Sub-categories
Overarching theme: Communication *(see Section 4.2.1)*	**Disrespect** *(see Section 4.2.2)*	Disrespect among pre-hospital and in-hospital personnel *(see under Section 4.2.2.1)*	Unfocussed Barriers to communication
		Isolation of patient *(see under Section 4.2.2.2)*	
		Isolation of family *(see under Section 4.2.2.3)*	
	Environment *(see Section 4.2.3)*	Distractions *(see Section 4.2.3.1)*	Traffic (people and family walking about) Increased activities Monitors Noise levels
		Interruptions *(see Section 4.2.3.2)*	Staff questions Patient treatment Multi-tasking Doctor's behaviour
	Handover *(see Section 4.2.4)*	Language *(See section 4.2.4.1)*	
		Inappropriate qualification *(see Section 4.2.4.2)*	
		From emergency care practitioner to nurse *(see Section 4.2.4.3)*	
		From emergency care practitioner to doctor if serious *(see Section 4.2.4.4)*	Doctor never present at handover
		Unstructured handover *(see Section 4.2.4.5)*	Verbal handover preferred
		Written handover *(see Section 4.2.4.6)*	
		Attentive listening by healthcare professionals *(see Section 4.2.4.7)*	
		History differs *(see Section 4.2.4.8)*	
		Repetition of handover *(see Section 4.2.4.9)*	
		Opportunity to pose questions to emergency care practitioner/family *(see Section 4.2.4.10)*	

Theme	Sub-theme	Categories	Sub-categories
	Confidentiality (see Section 4.2.5)		

The overarching theme of communication is discussed in Section 4.2.1 after which the sub-themes of disrespect, environment, handover and confidentiality and their related categories and sub-categories are discussed in depth in Sections 4.2.2 to 4.2.5.

4.2.1 Overarching theme: Communication

Communication was identified by the participants as the overarching theme occurring in all patient handovers in the ED. As in all disciplines, communication is a central part of daily activities. Participants stated that in all patient handovers effective communication was necessary to ensure transfer of patient information. It was evident that communication between emergency care practitioners and healthcare professionals was present during patient handovers and that information transfer did occur. Communication commenced once emergency care practitioners entered the ED and patient handover started. Although participants stated that effective communication was necessary for effective patient handover, it did not always take place. Various factors influenced the effectiveness of communication, such as: multiple distractions, interruptions, the busy ED environment and multiple activities occurring parallel to the patient handover. However, in the end the emergency care practitioners and the healthcare professionals aimed to attain effective communication skills.

Communication as a central theme was supported by the following notes made in the observation tools:

- *…Handover was finished before patient was taken off the immobilising equipment which allowed for good handover communication…* (observation tool: 2.1)
- *…Both parties seen as separate puzzle pieces that do not communicate…* (observation tool: 1.1)

Discussion: Communication is the core of all human interaction (Casey and Wallis 2011:35). Communication is defined as the transmission of verbal and or written information from a sender to a receiver and it follows a specific process: sender → message → receiver (Lunenburg 2010:1; Muller 2002:222; Siemsen, et al 2012:439). According to Lunenburg (2010:2), this written and/or verbal information is also known as the message given from the sender to the receiver with a specific intention. The presence of all elements in the communication process will determine the effectiveness of the communication. Should one element not be present or lag behind, communication effectiveness is reduced (Lunenburg 2010:2). The author further suggests that effective communication requires effort and skill on both sides of the message – the sender and the receiver (Lunenburg 2010:6). Effective communication, according to Muller (2002:221), occurs when the message received is the same as the intended message. Kilner and Sheppard (2010:136) are of the opinion that communication is one of the most important activities in healthcare. With regard to the current study, communication can be defined as the transfer of information from emergency care practitioners to healthcare professionals during patient handover in the ED.

The author Wilson (2011:22) very accurately describes the main aim of any patient handover as being the communication of information regarding the patient from one provider to the next. Aase, et al (2011:1) and Bost, et al (2010:216) confirm that patient handover (which is, in essence, the communication of information) in the ED occurs mainly between emergency care practitioners and healthcare professionals on arrival of the patient in the ED, as was the case in this study. Furthermore, the literature confirms that effective communication is necessary to ensure quality patient care delivery (Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al 2010:460).

According to Klim, Kelly, Kerr, Wood and McCann (2013:2237), Casey and Wallis (2011:36) and Owen, et al (2009:106), the main aim of any patient handover is to achieve effective communication. Effective communication during patient handover is especially important in high-acuity environments like the ED (Chan, et al 2014:1). However, Kilner and Sheppard (2010:128) concede that the busy and noisy environment of an ED has an impact on the effectiveness of communication between emergency care practitioners and healthcare professionals. Effective communication will result in continuity in patient care, improved patient safety and quality patient care delivery (Casey and Wallis 2011:35; Kilner and Sheppard 2010:135; Leonard and Frankel 2011:820; Manser and Foster 2011:187). Two ways in which effective communication can be achieved, as identified by Dawson, et al (2013:397), are when staff listen effectively and when they identify themselves at the start of the communication process. Furthermore, Calleja, et al (2011:11) suggest that a person who has effective communication skills has a sound knowledge base of what is being said, possesses the necessary behavioural skills towards others, has a positive outlook on communication, and uses the opportunity to communicate. In the current study, the participants agreed that effective communication was the main aim they should achieve during patient handovers in the ED.

The literature supports the belief that effective patient care depends on good communication during patient handovers between healthcare professionals (Sadri, et al 2014:37) and that healthcare professionals needs to strive for effective communication. Effective communication is, however, not possible if there is disrespect among the participants involved in the communication process. This brings us to the next sub-theme, namely that of disrespect.

4.2.2 Sub-theme 1: Disrespect

The research findings indicated that the participants identified disrespect, which occurred during patient handovers in the ED, as the first theme. Participants identified that there were signs of disrespect during patient handovers in the ED most of the time. Disrespect between emergency care practitioners and healthcare

professionals in the ED can have a negative influence on patient handover efficiency and communication. The sub-theme of disrespect is summarised in Table 4.2.

Table 4.2: Disrespect

Sub-theme	Category	Sub-category
Disrespect *(see Section 4.2.2)*	Disrespect among pre-hospital and in-hospital personnel *(see under Section 4.2.2.1)*	Unfocussed Barriers to communication
	Isolation of patient *(see under Section 4.2.2.2)*	
	Isolation of family *(see under Section 4.2.2.3)*	

The following notes from the observation tools supports the study findings related to disrespect:

- *…ECPs [emergency care practitioners] walked into ED, did not report to duty station, walked straight to the five-bed area…* (observation tool:17)
- *…EN [enrolled nurse] closed curtain while handing over, putting ambulance crew on the outside…* (observation tool:1.2)
- *…Nurses started treatment before handover was completed and did not listen…* (observation tool:1.1)
- *…RN [professional nurse] then asked them, the family, to leave…* (observation tool: 3)
- *…Patient not involved, no questions or input asked during handover…* (observation tool:14)

Discussion: With regard to this study, disrespect was defined as the disrespectful interaction among pre-hospital and in-hospital personnel as well as the exclusion of family and the patient from the patient handover. Emergency care practitioners and healthcare professionals work in different environments (pre-hospital and in-hospital). During patient handover these two environments intersect, and the personnel from these two environments need to respect one another (Van Wyk 2012:109). According to Rosenstein and Naylor (2012:140), good inter-professional relationships, trust and collaboration must be maintained between emergency care

practitioners and healthcare professionals in the ED. Disrespect between these two environments will have an impact on inter-professional relationships and the effectiveness of communication, which, in turn, will have an effect on patient outcomes (Rosenstein and Naylor 2012:142).

The findings of the current study correlated with the findings of Rosenstein and Naylor (2012:140) where personnel in the ED behaved in a disrespectful manner and this disrespectful behaviour had an impact on the quality of patient handovers.

Three main categories were identified as areas in which disrespect was observed, namely: disrespect among pre-hospital and in-hospital personnel, isolation of a patient from the patient handover, and isolation of a family from the patient handover. Each category will be discussed individually in Sections 4.2.2.1 to 4.2.2.3.

4.2.2.1 Disrespect amongst pre-hospital and in-hospital personnel

The first category identified under the sub-theme of disrespect was disrespect among pre-hospital and in-hospital personnel, which indicated that disrespect was observed among these two categories of staff during patient handovers in the ED. One sign of disrespect was that emergency care practitioners would not report their presence or greet the other staff when entering the ED. Emergency care practitioners would enter the ED, walk straight to the bed and transfer the patient. This practice gave healthcare professionals the impression that emergency care practitioners were only there to drop off the patient. The habit of emergency care practitioners to not greet other staff when entering the ED could lead to the healthcare professionals being unaware of the new patient, which would delay the patient handover. On the other hand, healthcare professionals also did not always greet emergency care practitioners upon entering the ED. Participants also identified that healthcare professionals were not always focussed on the patient handover being conducted.

The following notes from the observation tools supports the study findings related to the category disrespect amongst pre-hospital and in-hospital personnel:

- *…CCA [advanced life support emergency care practitioner] seem irritated by the fact that he had to wait…* (observation tool:19)
- *…Nurses started treatment before handover was completed and did not listen…* (observation tool:1.1)
- *…Paramedics [emergency care practitioners] entered unit and passed front desk without greeting…* (observation tool:1.1)

Discussion*:* During patient handover in the ED two cultures (pre-hospital and in-hospital) intersect: emergency care practitioners exit their pre-hospital environment and enter the in-hospital environment (ED) of the healthcare professionals. Most people are raised to observe the social custom of greeting others when you enter their "territory" or environment – this is seen as good manners. As far back as 1998, O'Keefe, et al (1998:679) pointed out that emergency care practitioners should always keep in mind that the healthcare professionals in the ED might be busy and might not always be able to receive a patient immediately on arrival. Therefore, it is important that emergency care practitioners greet and inform healthcare professionals of their presence.

The literature provides evidence that the two cultures mentioned above do not always share the same values, languages and social structures and that certain behaviours can be interpreted as showing a lack of respect. According to Jensen, et al (2013:968), a lack of knowledge and recognition of the different competencies of different categories of staff (in the different cultures) can affect teamwork, which will, in turn, affect patient handover. According to Dawson, et al (2013:396), good professional relationships (as part of good communication) and respect for each other's roles are very important for good teamwork and effective patient handovers. Disrespect between healthcare professionals and emergency care practitioners will affect patient handovers. The findings of the current study corroborated these statements.

Strategies relating to disrespect among pre-hospital and in-hospital personnel

The participants suggested the following strategies relating to disrespect among pre-hospital and in-hospital personnel that could be implemented in the future to ensure that disrespect between emergency care practitioners and healthcare professionals do not occur and that patient handovers are not affected:

- *Show mutual trust and respect.*
- *Greet colleagues in a friendly manner when entering the ED (both emergency care practitioners and healthcare professionals).*
- *Greet and be respectful to all members of the multi-disciplinary team, patients and family.*
- *Speak in a respectful manner to patients, medics and family members.*

Two sub-categories were identified related to disrespect among pre-hospital and in-hospital personnel, namely unfocussed personnel and barriers to communication, which are now discussed.

⇨ *Unfocussed personnel*

The first sub-category identified under the category of disrespect among pre-hospital and in-hospital personnel was that of personnel being unfocussed. According to the participants healthcare professionals were unfocussed at most of the patient handovers in the ED, which they identified was a sign of disrespect towards the emergency care practitioners conducting the patient handovers. Multiple reasons for this lack of focus were identified, for instance, healthcare professionals were busy with other tasks, busy treating patients, busy asking questions or busy talking to other staff members or the patient during the patient handover. When healthcare professionals did not focus during patient handovers they needed to ask more questions, and this led to the repetition of tasks during the patient handover and to emergency care practitioners getting the impression that they were unfocussed.

The following notes from the observation tools support the study findings related to the sub-category unfocussed personnel:

- *…EN [enrolled nurse] was busy connecting patient to the monitor while BAA [basic life support emergency care practitioner] did the handover…* (observation tool:7)
- *…Staff [healthcare professionals] busy with patient treatment during handover…*(observation tool:8)
- *…ENA [auxiliary nurse] starting treatment during handover"* (observation tool:13)
- *…Staff [healthcare professionals] talking to patient and each other…*(observation tool:15)

Discussion: In terms of this study, unfocussed refers to the inability of healthcare professionals to listen to information about and focus only on the patient handover being conducted by the emergency care practitioner. According to the literature, the ability of healthcare professionals to remain focussed on the patient handover being conducted seems to be a challenge. Bost, et al (2010:216) remark that one of the barriers to effective patient handover is that staff do not pay attention to the patient handover (that they are unfocussed). Dawson, et al (2013:396) is of the opinion that staff's disinterest in and lack of focus during the patient handover are behavioural problems affecting patient handover. According to Owen, et al (2009:104), healthcare professionals concentrate more on providing patient treatment than on listening to information given during the patient handover, even if the patient is not critical. These authors remark that many emergency care practitioners complain about this problem and express the wish that someone will listen to them while they are conducting a patient handover.

These findings were confirmed in the current study. The observers noted that healthcare professionals' ability to remain focussed during patient handovers was seen as a challenge. The findings of the study supported the findings in the literature that healthcare professionals are unfocussed during patient handover. The lack of focus can be ascribed to, for instance, multi-tasking by healthcare professionals, the busy environment, distractions and interruptions (Dawson, et al 2013:398; Owen, et al 2009:104), but is still regarded as being disrespectful.

Strategies relating to unfocussed personnel

The participants suggested the following strategy relating to the category of unfocussed personnel that could be implemented to ensure that healthcare professionals remain focussed during patient handovers, leading to the improvement of patient handovers:

- *Nurses must focus and take note while the handover is being conducted.*

⇨ *Barriers to communication*

The second sub-category under disrespect among pre-hospital and in-hospital personnel that participants identified was barriers to communication. One specific barrier to communication that participants identified was the closing of curtains around the patient before the patient handover had been completed. When healthcare professionals closed the curtains too soon, the emergency care practitioners was left on the outside, which made it difficult or impossible for them to complete their patient handover effectively. The participants indicated that the emergency care practitioners could get the impression that the healthcare professionals were no longer interested in what was being said, with the result that the emergency care practitioners performed the patient handover hurriedly. This was the case with one patient handover when the emergency care practitioners stopped conducting the patient handover before providing all the information. In another instance, when the curtains were closed disrespectfully early, the emergency care practitioners also stopped the patient handover. When the observer asked the emergency care practitioners questions afterwards, more information were received from the emergency care practitioner. However, this information had not been transferred to the healthcare professional involved, due to the barrier caused when curtain was drawn. It must be conceded that healthcare professionals might not intend to be disrespectful when they close the curtains but that they do so to give the patient privacy.

The following notes from the observation tools support the study findings related to the sub-category barriers to communication:

- *…ENs [enrolled nurses] started closing curtains to do ECG while paramedic [emergency care practitioners] was still talking to dr [doctor]. Curtains placed all paramedics [emergency care practitioners] outside and handover stopped…*(observation tool:1.1)
- *…Curtains drawn around the patient and they were standing on the outside"*
  (observation tool:6)…
- *…Curtains drawn around patient…*(observation tool:9)

Discussion: According to Muller (2002:223), barriers to communication can be classified as internal and external barriers. Internal barriers will refer to mental, spiritual and physical aspects, whereas external barriers will refer to incorrect formulation of the problem, problems with transmission and interpretation of the message and a lack of time. With regard to this study, a barrier to communication was identified as the situation when healthcare professionals drew a curtain around the patient, excluding the emergency care practitioners. This barrier would prevent the transfer of information between the emergency care practitioner and the healthcare professionals.

The literature provides evidence that communication will break down whenever there is interference in any of the elements of the communication process (Lunenburg 2010:3). According to Aase, et al (2011:1), patient handovers in the ED between emergency care practitioners and healthcare professionals are very prone to communication barriers. A stressful environment, which causes some people to experience difficulty in formulating a message, can also be regarded as a barrier to communication (Muller 2002:224). The stressful environment of an ED can put additional strain on the ability of its healthcare professionals to formulate and convey accurate messages. In summary it can be said that the communication barriers caused by the drawing of the curtains that excludes the emergency care practitioners as well as the stressful environment of the ED will influence the adequacy of the patient handover.

Strategies relating to barriers to communication

The participants suggested the following strategy relating to the sub-category of barriers to communication:

- *The Sister [professional nurse] must not close the curtain behind the medics [emergency care practitioners]*

4.2.2.2 Isolation of patient

The second category identified under the sub-theme of disrespect was the isolation of the patient from the patient handover. Participants identified that patients were not involved in the patient handover carried out by the emergency care practitioners and the healthcare professionals in the ED. In all of the patient handovers observed the patients were awake and, except for one patient, also alert. Patients were, therefore, able to provide information but were not given the opportunity. In most of the patient handovers observed the patient interrupted the patient handover continuously to provide information and it was evident that the patient wanted to contribute to the patient handover. Although participants realised it was important to include patients in the patient handover process, which was not always the practice in the ED.

The following notes from the observation tools support the study findings related to the category isolation of patient:

- *…Patient not involved, no questions or input asked during handover…* (observation tool:14)
- *…Patient wasn't visible during the handover, patient was in the triage room and handover took place in the hallway…* (observation tool:12)
- *…Patient awake but was not involved in handover... No questions asked…* (observation tool:16)
- *…Patient awake but not part of handover…* (observation tool:18)

Discussion: In terms of this study, the isolation of a patient refers to the situation where emergency care practitioners and healthcare professionals do not involve the patient during the patient handover process. Despite all the benefits of and all the efforts made to facilitate patient-centred care and patient involvement in the patient handover, many patient handovers still lack patient involvement (Klim, et al 2013:2235; Tidwell, Edwards, Snider, Lindsey, Reed, Scroggins, Zarski and Brigance 2011:E1).

According to Sadri, et al (2014:40) and Bruce and Suserud (2005:204), the ideal patient handover is one which involves the emergency care practitioners, healthcare professionals as well as the patient. The involvement of the patient in the handover process can be considered as a sign of respect towards the patient. It is stated in the Patients' Rights Charter (Department of Health 2014) that patients have the right to "participation in decision making", a statement that is reiterated by Bruce and Suserud (2005:207). Patients will be able to exercise this right if they are involved in the patient handover.

The findings of numerous studies are that the involvement of patients in the handover process leads to a decrease in adverse events, improved communication and enhancement of the continuity of patient care (Casey and Wallis 2011:36; Kerr, et al 2013:1686; McMurray, et al 2011:20). In addition, McMurray, et al (2010:2581) state that patient involvement in patient handovers leads to less fragmented patient care delivery, effective communication, a decrease in adverse events and continuity in patient care delivery. If patient-centred care is introduced, patients are given the opportunity to participate in the patient handover process. This could result in patients being more involved in decision-making, fragmented care being reduced, adverse events being decreased, patient care being enhanced and patients satisfaction increased. Patient involvement also provides the patient with the opportunity to rectify any unclear information and to contribute by adding additional necessary information (Kerr, et al 2013:1690). Furthermore, Bradley, Curry, Webster, Mattera, Roumanis, Radford, McNamara, Barton, Berg and Krumholz (2006:1084) confirm in their study that a patient-centred culture in healthcare

settings leads to an overall improvement in patient outcomes. According to Jensen, et al (2013:967), the literature does not contain any evidence that there is patient involvement in handover practices, and the finding of the current study corroborated this.

Strategies relating to the isolation of a patient

The participants suggested the following strategies relating to this category that could be implemented in order to ensure that the patient is not isolated from the patient handover and that patient handovers are subsequently improved:

- *Include the patient and the family in the patient handover.*
- *Ask the family and the patient questions.*
- *Let family and patients have input.*

4.2.2.3 Isolation of family

The third and final category identified under the sub-theme of disrespect was the isolation of the family from the patient handover. Participants observed that the family was not given the opportunity to participate during the patient handover and, therefore could not provide information to healthcare professionals. Generally, family members were not allowed to be in the room during the patient handover. Because the family members were excluded from the patient handover they kept on entering the patient handover area and caused multiple interruptions during the patient handover process.

In three of the patient handovers it was evident that the family was able to provide healthcare professionals with more information when asked questions by the observer. By including the family more accurate and complete information can be gained and the continuity of patient care can be ensured.

The following notes from the observation tools support the study findings related to the category isolation of the family:

- *Family came in for second time while patient is being removed from immobilising equipment…* (observation tool:2.1)
- *RN [professional nurse] then asked family to leave during handover…* (observation tool:3)

Discussion: In terms of this study the isolation of the family refers to the exclusion of the family members from the patient handover process between the emergency care practitioner and the healthcare professionals in the ED. The findings of this study that most patient handovers occurred without any family involvement and that these patient handovers mainly involved healthcare professionals from different disciplines, correlated with the findings of Tidwell, et al (2011:E1).

In 1988, the Picker/Commonwealth Patient-centred Care Program launched an initiative to divert the attention of healthcare professionals away from diseases and back to the patient and the family (Barry and Edgman-Levitan 2012:780). As far back as 2005, Bruce and Suserad (2005:205), and more recently Tidwell, et al (2011:E3), reported that the involvement of the family during patient handovers resulted in an increased amount of information about patients' complaints being provided to healthcare professionals and in increased family satisfaction ratings.

Strategies relating to family involvement

The participants suggested the following strategies relating to this category that could be implemented in order to ensure family involvement in patient handovers, thereby improving patient handovers:

- *Allow the family to stay with the patient while the handover is done.*
- *Ask the family and the patient questions.*
- *Let family and patients have input.*

4.2.3 Sub-theme 2: Environment

The second sub-theme that participants identified during the data analysis process was that of the environment. Patient handovers in an ED occur in a specific and

unique environment where distractions and interruptions occur all the time. Patient handovers are conducted in different areas in the ED. Of the 20 patient handovers observed 13 took place in a five-bed area and at the patient's bedside, two in the procedure room also at the patient's bedside, two in the resuscitation area at the patient's bedside, one in the triage room and two in the hallway. Due to the busy ED environment it is sometimes necessary that patient handovers are done in different areas in the ED. In the opinion of the participants it was best practice to conduct a patient handover next to a patient's bedside. In addition, fewer interruptions and distractions were observed when a patient handover was done at a patient's bedside than when it was done in the busy hallway. The data collected pertaining to this sub-theme (environment) is summarised in Table 4.3.

Table 4.3 Environment

Sub-theme	Category	Sub-category
Environment *(see Section 4.2.3)*	Distractions (*see Section 4.2.3.1*)	Traffic (people and family walking about)
		Increased activities
		Monitors
		Noise levels
	Interruptions *(see Section 4.2.3.2)*	Staff questions
		Patient treatment
		Multi-tasking
		Doctor's behaviour

The following notes from the observation tools support the study findings related to the sub-theme environment:

- *…Busy environment noted while handover was done…* (observation tool:1.2)
- *…Lots of activities happening which were distractive during handover…* (observation tool:10)
- *…Unit in general very busy…* (observation tool:11, 12 and 14)

Discussion: With regard to this study, environment refers to the area in which the patient handovers occur, namely the ED of a hospital in Gauteng, South Africa.

Patient handovers done in the different environments carry the risk of problems because of the differences in the professional and cultural backgrounds of the emergency care practitioners and healthcare professionals involved in the process (Sujan, Chessum, Rudd, Fitton, Inada-Kim, Spurgeon and Cooke 2015:112). The risk of problems is even greater in the unique environment of an ED. The ED is the one department in the hospital with the highest stress levels and the highest potential for chaos that can erupt at any moment (Rosenstein and Naylor 2012:147). In addition, workloads in the unique ED environment are high, making it difficult for patient handovers to be done with accuracy and without distractions or interruptions (Kilner and Sheppard 2010:135).

Many authors, for instance, Dawson, et al (2013:396), Owen, et al (2009:105) and Laxmisan, et al (2007:801), further describe the ED environment as a unique, unpredictable, complex and dynamic environment in which the difficulties to receive and provide information give rise to challenges. Interruptions that disrupt patient handovers occur frequently (Laxmisan, et al 2007:801). This was also the finding of the current study. The current study also corroborated the finding in existing literature that patient handovers occur in various areas (for instance, the nurses' station and the hallway) inside the ED, even though the patient's bedside is the best place to conduct a patient handover (Kerr, McKay, Klim, Kelly and McCann 2013:1686; Meisel and Smith 2015:76). Conducting a patient handover at a patient's bedside facilitates the involvement of the patient and keeps patient information confidential, in this way ensuring adequate patient handovers and continuity in patient care in the ED environment.

Two main categories were identified as factors in the environment affecting patient handover practices namely: distractions and interruptions. Each category will be discussed individually in Sections 4.2.3.1 and 4.2.3.2.

4.2.3.1 Distractions

The first category participants identified under the sub-theme of environment was distractions. It was observed that many distractions occurred in the ED environment

during patient handovers. Participants expressed the opinion that distractions could have an influence on the effectiveness of the patient handover, the information transferred and the information received. They furthermore stated that these distractions should be limited.

The following notes from the observation tools support the study findings related to the category distractions:

- *A lot of movement around the bed was noted…* (observation tool:1.2)
- *Staff [healthcare professionals] busy with patient treatment during handover and talking to patient which were distractive…* (observation tool:8)
- *Lots of activities happening which were distractive during handover…* (observation tool:10)
- *Noise from people talking and walking past was heard and distracting…* (observation tool:14)
- *Distractions from staff [healthcare professionals] activities and questioning…* (observation tool:13)

Discussion: With regard to this study, distractions refer to the multiple factors distracting emergency care practitioners and healthcare professionals that prevented them from listening attentively to patient handovers. These multiple distractions prevented effective patient handovers. According to various authors, for instance, Bost, et al (2010:211), Dawson, et al (2013:396), Kerr, et al (2013:1686), Ong and Coiera (2011:280), Owen, et al (2009:104), and Poot, et al (2014:167), multiple distractions (for example, the many activities taking place in this busy environment) occur daily during patient handovers in the ED. These distractions affect patient handovers in the ED in the sense that they cause information to be lost during a patient handover due to healthcare professionals experiencing difficulties with listening effectively. The end result is that the patient handovers conducted by the emergency care practitioners might be inadequate.

Four sub-categories were identified relating to the distractions in the environment namely: traffic (people and family) walking about, increased activities, monitors and noise levels which are now discussed.

⇨ *Traffic*

The first sub-category identified under the category distractions was traffic (people and family walking about). Participants identified that the large amount of traffic present during patient handovers in the specific ED caused many distractions as far as the patient handovers were concerned. This traffic included people walking past, other patients entering the ED and staff entering the room where the patient handover took place. Every time a distraction occurred, emergency care practitioners and healthcare professionals stopped the handover causing them to be distracted. The layout and the location of the ED was also identified as contributing to the increased amount of traffic going in and out of the unit.

The following notes from the observation tools support the study findings related to the sub-category traffic:

- *Unit very busy with people walking past, which was distractive…* (observation tool:20)
- *People [staff and visitors] walking past handover was distractive…* (observation tool:19)
- *Cleaner busy with floor buffer was also a distraction and audible…* (observation tool:13)
- *People [staff] walking past handover as it is in the five-bed area…* (observation tool:13)
- *Family member came in twice while handover was still taking place…* (observation tool:2.1)
- *Family came back to talk to RN [professional nurse] and handover had to stop…* (observation tool:3)

Discussion: In terms of this study, traffic refers to the amount of people walking in and out of the ED while patient handovers are conducted. These people include staff members working in the ED (healthcare professionals and administration staff), family members of patients and visitors. According to Poot, et al (2014:169) and Laxmisan, et al (2007:804), one of the factors causing a distraction in the patient handover process is staff walking past. This also causes an increase in the traffic in the ED. These authors find that the walking past of especially healthcare professionals (even though it is of short duration) is very disruptive to the patient handover process. Furthermore, the literature confirms that patients, staff and activities crowded the ED and caused distraction during patient handovers in the ED (Manser and Foster 2011:183).

According to Dawson, et al (2013:393), Manser and Foster (2011:183), Bost, et al (2010:211) and Laxmisan, et al (2007:802), overcrowding in the ED contributes to an increase in distractions and noise levels. In turn, these distractions have a negative impact on the ability of the staff members involved to adequately transfer information during patient handovers. Furthermore, Laxmisan, et al (2007:804) point out that specifically people, other than staff, walking past the patient handover cause a distraction in the patient handover. The impact of these distractions varies from major to minor, were a major distraction can cause a patient handover to stop completely, which can result in a lot of information being lost.

Strategies relating to traffic

The participants suggested the following strategies relating to this category that could be implemented in order to decrease traffic (people and family walking about) and the effect traffic has on patient handovers in the ED, thereby improving patient handovers:

- *Decrease traffic in the unit.*
- *Have separate waiting areas for family and for people [patients] waiting for treatment.*

⇨ ***Increased activities***

The second sub-category identified by participants under the sub-theme environment and the category distractions, was increased activities. Participants observed that increased activities in and around the area where the patient handover took place frequently occurred during patient handovers in the ED. These activities included: healthcare professionals starting patient treatment, people (staff, family members, visitors) walking past, other staff (administrative) coming in to ask questions and a large number of people (emergency care practitioners and healthcare professionals) busying themselves with activities around the patient's bedside. The increased activities distracted emergency care practitioners and healthcare professionals from the patient handovers.

The following notes from the observation tools support the study findings related to the sub-category increased activities:

- *Lots of activities happening which were distractive during handover…* (observation tool:10)
- *Staff [healthcare professionals] walking in and out, talking to other patients…* (observation tool:9)
- *Resus area at entrance of the unit, lots of people going in and out of the unit…* (observation tool:8)
- *A lot of movement around the bed was noted…* (observation tool:1.2)

Discussion: With regard to this study, increased activities refer to all the activities occurring around the patient's bedside as well as in the ED while a patient handover between emergency care practitioners and healthcare professionals occurs. Manser and Foster (2011:183) identify increased activities in the ED environment as care activities (for instance, attaching monitors and intravenous infusions) that occur during patient handover and that lead to distractions during patient handover. IN the ED most of these activities are usually carried out in conjunction with the verbal patient handover, resulting in the effectiveness of the patient handover being affected negatively. Calleja, et al (2011:13) confirmed that the activity of

simultaneously performing tasks and listening to patient handovers is a recurrent one in the ED. Healthcare professionals can experience conflict as they have to prioritise either management and listening – and usually management is given first priority. All the activities related to management increase the intensity of the activities occurring during patient handover and all of them contribute to the environment in the ED being extremely noisy and busy (Bost, et al 2010:211).

Strategies relating to increased activities

The participants suggested the following strategy relating to increased activities that could be implemented in order to reduce the amount of activities occurring during patient handovers and causing distractions:

- *Listen to the handover before continuing with other activities.*

⇨ *Monitors*

The third sub-category identified under the category of distractions was monitors. Participants indicated that monitors were one of the distractions observed in the ED during patient handovers between emergency care practitioners and healthcare professionals. The observers noted that the noise of monitors in the background during patient handovers was quite distracting. The open layout of especially the five-bed area in the ED also contributed to increased noise levels, in particular the noise caused by the monitor alarms. The noise from monitors was identified as the beeping sound the cardiac monitor made, as well as the alarms that went off when abnormal vital signs were detected. Participants identified that monitors were a great distraction to emergency care practitioners and healthcare professionals due to their natural instinct to respond to the sounding of alarms. When the alarms went off they tended to stop the patient handover.

The following notes from the observation tools support the study findings related to the sub-category monitors:

- *Monitor alarm in the background…* (observation tool:2.1)

- *One monitor was heard in the background…* (observation tool:2.2)
- *Monitors could be heard in the background…* (observation tool:3, 6)
- *Monitors were audible…* (observation tool:18)

Discussion: In terms of this study a monitor refers to the cardiac monitor patients are connected to when in the ED. A cardiac monitor is a device used for the continuous observation of cardiac function in the ED. Ill or injured patients need to be monitored while in hospital, especially in the ED. Some critically ill/injured patients require continuous monitoring of their cardiovascular systems, a process that is called hemodynamic monitoring (Smeltzer and Bare 2004:677). Hemodynamic monitoring can be defined as the use of monitoring devices to measure a patient's cardiovascular function (Smeltzer and Bare 2004:647). According to Pines, Mullins, Cooper, Feng and Roth (2013:15), the practice of continuous hemodynamic monitoring of patients in the ED has increased since 2009. In the ED, hemodynamic monitoring is used for different reasons, for instance to distinguish between low- and high-risk patients and to continuously monitor patients to aid the early recognition of life-threatening emergencies requiring immediate treatment (Middleton and Davies 2011:342). Monitor alarm can go off during hemodynamic monitoring when a patient's recorded values are outside the set normal parameters on the monitor. Not only does the sounding of a monitor alarm cause noise, but it also causes patient handover to be interrupted due to the impulse emergency care practitioners and healthcare professionals have to respond to monitor alarms (Graham and Cvach 2010:28). Although these alarms distract both emergency care practitioners and healthcare professionals busy with patient handover, their noise cannot be helped because monitoring is an important and necessary activity in the ED.

Strategies relating to monitors

The participants suggested the following strategy relating to monitors that could be implemented to reduce the effect of monitor alarms on the conducting of patient handovers in the ED and to limit distractions and, therefore, to improve patient handovers:

- *Silence the monitor alarms.*
- *Set the alarms according to the individual.*

⇨ *Noise levels*

The fifth and final sub-category identified by participants under the category of distractions was noise levels. Participants identified that the noise levels in the ED during patient handover were very high and audible. Two specific sources of increased noise levels identified during the observation were the cleaner and the administration clerk. The floor buffers the cleaners used to clean the floor with were very noisy, making it difficult for healthcare professionals and even the observers to hear the patient handover. Participants agreed that although it was impossible to eliminate noise in the ED completely, an attempt had to be made to keep it to a minimum.

The following notes from the observation tools support the study findings related to the sub-category noise levels:

- *A cleaner was busy buffing the floor making a noise and making it difficult to hear handover…* (observation tool:1.2)
- *Came back to talk to RN [professional nurse] with the secretary and handover had to stop…* (observation tool:3)
- *Cleaning staff busy cleaning which can be heard and seen…* (observation tool:11)
- *Cleaner busy with floor buffer was also a distraction and audible…* (observation tool:13)
- *Lots of noise audible in the unit…* (observation tool:20)

Discussion: With regard to this study, noise refers to the noise audible in the background during patient handovers that influences the transfer of information and makes it difficult to hear the patient handover clearly. Multiple studies confirm that noise in the ED is a big problem that hampers communication (Evans, Murray, Patrick, Fitzgerald, Smith and Cameron 2010:3; Kilner and Sheppard 2010:128;

Manser and Foster 2011:183). Furthermore, Dawson, et al (2013:396) and Cheung, et al (2009:4) refer to the difficulty to transmit a message if background sounds are loud, noisy and disruptive, especially in an ED, leading to barriers in communication and ineffective patient handovers. Evans, Murray, Patrick, Fitzgerald, Smith and Cameron (2010:5) point out that noise levels in an ED sometimes exceed those recommended by the Environmental Protection Agency, and that such high noise levels affect patient care delivery negatively. It is therefore save to say that noise also make it difficult for healthcare professionals to hear patient handovers conducted by emergency care practitioners making retaining and recalling information a challenge.

Strategies relating to noise levels

The participants suggested the following strategies relating to noise levels that could be implemented in order to reduce noise levels during patient handovers in the ED and to improve patient handovers:

- *Give in-service training in keeping noise levels down, ask everyone to be aware of the noise they make and to practise keeping it down every day.*
- *Minimise levels of noise to improve patient handovers.*
- *Display signs to raise awareness of the need to decrease noise levels.*

4.2.3.2 Interruptions

The second category identified under the sub-theme environment was interruptions. Participants identified that interruptions during the patient handover process were many, often causing a stoppage in the handover process and loss of information. They remarked that interruptions influenced the adequacy of information transfer during patient handovers.

The following notes from the observation tools support the study findings related to the category interruptions:

- *…RN [professional nurse] also interrupted AEA [intermediate life support emergency care practitioner] twice by asking questions…* (observation tool:5)
- *…AEA [intermediate life support emergency care practitioner] started handover then stopped when RN [professional nurse] asked something about the drip…* (observation tool:6)

Discussion: With regard to this study, interruptions refer to the activities that interrupt the patient handover process between emergency care practitioners and healthcare professionals as observed in the ED. The literature confirms that interruptions are inevitable and re-occur in the ED environment, leading to an inadequate patient handovers (Bost, et al 2010:211; Calleja, et al 2011:11; Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al 2010:460; Klim, et al 2013:2235; Laxmisan, et al 2007:801; Poot, et al 2014:167). Furthermore, Poot, et al (2014:169) confirmed this fact and reported that every patient handover is interrupted at least once. Some of these interruptions are caused by healthcare professionals asking questions during the patient handover, by other patients needing attention, other staff and ringing telephones (Laxmisan, et al 2007:804; Poot, et al 2014:167).

Four sub-categories were identified relating interruptions namely: staff questions, treatment of patients, multi-tasking and behaviour of doctors which are now discussed.

⇨ *Staff questions*

The first sub-category identified under the category of interruptions was staff questions. Participants indicated that healthcare professionals asking the patient or the emergency care practitioner questions while the patient handover was done interrupted the patient handover. There were different reasons for asking questions, but the fact remained that it interrupted the patient handover.

The following notes from the observation tools support the study findings related to the sub-category staff questions:

- *…RN [professional nurse] also interrupted AEA [intermediate life support emergency care practitioner] twice by asking questions…* (observation tool:5)
- *…AEA [intermediate life support emergency care practitioner] started handover then stopped when RN [professional nurse] asked something about the drip. AEA [emergency care practitioner] then started with handover from the start again*… (observation tool:6)
- *…RN [professional nurse] asking questions to patient interrupted handover as well…* (observation tool:13)

Discussion: In terms of this study, staff questions refer to the questions the healthcare professionals and administrative staff ask to either the emergency care practitioner or the patient during the patient handover. It is confirmed in the literature that in order to gather more detailed and relevant clinical information necessary for the immediate treatment of a patient, healthcare professionals still asked questions despite a detailed patient handover done by emergency care practitioners (Poot, et al 2014:169; Sujan, Chessum, Rudd, Fitton, Inada-Kim, Spurgeon, et al 2015:113).

Strategies relating to staff questions

No specific strategies relating to the category of staff questions were identified by participants.

⇨ *Patient treatment*

The second sub-category identified under the category of interruptions was patient treatment. It was observed that treatment occurred parallel with the patient handover. In some instances patient treatment was initiated by the healthcare professional listening to the patient handover and in other cases by other healthcare professionals during patient handover. When healthcare professionals initiated the treatment of a patient during a patient handover, emergency care practitioners got the impression that these healthcare professionals were more interested in commencing patient treatment than listening to the patient handover.

The following notes from the observation tools support the study findings related to the sub-category patient treatment:

- *…Staff [healthcare professionals] busy with their treatment while handover occurred…* (observation tool:1.2 and 8)
- *…EN [enrolled nurse] and ENA [auxiliary nurse] were busy with patient treatment…* (observation tool:6)
- *…EN [enrolled nurse] was busy connecting patient to the monitor while BAA [basic life support emergency care practitioner] did the handover…* (observation tool:7)
- *…EN [enrolled nurse], ENA [auxiliary nurse] and an AEA [intermediate life support emergency care practitioner] started with patient treatment and talking to patient and one another during handover…* (observation tool:9)

Discussion: Treatment of patients can be defined as "the mode of dealing with a patient or disease" (Weller 2001:397). With regard to this study, patient treatment refers to the management and service rendered to patients by healthcare professionals during the patient handover. According to Dawson, et al (2013:394) and Jensen, et al (2013:966), the practice of healthcare professionals to manage patients during patient handover is one of the causes of information loss and inadequate patient handovers in the ED. Manser and Foster (2011:183) also identified some of the management healthcare professionals deliver to patients during the patient handover as connecting the patient to the monitor, inserting infusions. These activities tend to interrupt the patient handover process. Calleja, et al (2011:13) highlighted the conflict that exists within the healthcare professionals between listening to the patient handover first and providing immediate patient treatment. The authors call it tension between "doing and listening" and indicate that the patient treatment (the doing) is prioritised. Furthermore, Owen, et al (2009:104) mention that emergency care practitioners find it very frustrating that healthcare professionals start with patient treatment during the patient handover instead of listening attentively to the patient handover. The findings of the current study corroborated the findings in the literature.

Strategies relating to the treatment of patients

No specific strategies relating to the category of patient treatment were identified by participants.

⇨ *Multi-tasking*

The third sub-category participants identified under the category of interruptions was multi-tasking. Participants indicated that both emergency care practitioners and healthcare professionals performed multiple tasks and activities during patient handover. This can be ascribed to the busy ED environment as well as to the high workload inevitable in an ED. Participants identified that although multi-tasking did occur, it should not be the practice in the unit.

The following notes from the observation tools support the study findings related to the sub-category multi-tasking:

- *…RN [professional nurse] was writing and listening to the handover at the same time…* (observation tool:9)
- *…EN [enrolled nurse] listening and writing during handover…* (observation tool:10)
- *…RN [professional nurse] writing and listening to handover…* (observation tool:11)
- *…RN [professional nurse] writing and listening to handover…* (observation tool:11)
- *…AEA [intermediate life support emergency care practitioner] was busy typing info on his tablet while busy with the handover…* (observation tool:5)

Discussion: With regard to this study, multi-tasking refers to healthcare professionals' performance of multiple tasks and activities during the patient handover process. Various research studies confirm that multi-tasking takes place during patient handover, causing interruptions to the patient handover process (Bost, et al 2010:215; Calleja, et al 2011:11; Jensen, et al 2013:966; Kilner and Sheppard

2010:128; Klim, et al 2013:2235; Ong & Coiera 2011:280).Owing to the frequency of multi-tasking in the ED, the cognitive functioning of healthcare professionals is being challenged. Ultimately this leads to impaired memory resulting in healthcare professionals forgetting information communicated during patient handovers. In turn, it will also have a negative impact on patient care (Kilner and Sheppard 2010:128; Laxmisan, et al 2007:803).

In addition, multi-tasking can lead to communication errors and communication breakdown (Ong and Coiera 2011:280) and inattentive listening by healthcare professionals during the patient handover (Dawson, et al 2013:397). According to Laxmisan, et al (2007:807), one of the possible reasons why healthcare professionals in the ED multi-task are because they prioritize. Although they have to listen attentively to the patient handover it is just as or even more important to identify and treat the patient's problems as soon as possible, especially in the case of a patient who is triaged as category red.

Strategies relating to multi-tasking

No specific strategies relating to the category of multi-tasking were suggested by the participants.

⇨ *Doctor's behavior*

The last sub-category identified under interruptions was the doctor's behavior. In two of the patient handovers observed in the ED, participants identified that the doctor's behavior during the patient handover was inappropriate, which led to an interruption in the patient handover process. Not only was the patient handover interrupted, but emergency care practitioners also did not transfer all the information. During one observation in which it was evident that not all information had been transferred, the observer asked the emergency care practitioners more questions, upon which more information was received than had been transferred.

The following notes from the observation tools support the study findings related to the sub-category doctor's behaviour:

- *…Dr [doctor] placed stethoscope in her ears and started auscultating chest while student [emergency care practitioner student] was still handing over…* (observation tool:1.1)
- *…Overall HCP [healthcare professionals] not listening to paramedic [emergency care practitioner] and paramedic [emergency care practitioner] not giving all the info…* (observation tool:1.1)
- *…RN [professional nurse] told CCA [advanced life support emergency care practitioner] to start with handover, dr [doctor] then asked patient how she is and what happened before CCA [advanced life support emergency care practitioner] could start with handover…* (observation tool:17)

Discussion: With regard to this study, doctor's behaviour refers to the way in which the doctor behaves during the patient handover, causing interruptions in the patient handovers. Such behaviour can be regarded as being inappropriate and disrespectful for the emergency care practitioners and other healthcare professionals. Evidence is provided in the literature that the inappropriate behavior of doctors and healthcare professionals in an ED can influence the adequacy of patient handovers (Wood, Crouch, Rowland and Pope 2014:6).

Strategies relating to doctor's behavior

No specific strategies relating to the category of doctor's inappropriate behavior were suggested by the participants.

4.2.4 Sub-theme 3: Handover

The third sub-theme identified by participants during the data analysis session was that of handover. Handover pertains to all the activities occurring during a patient handover. In all the cases observed the patients who arrived in the ED by ambulance were handed over by the emergency care practitioners to the healthcare professionals in the ED. During patient handovers information was transferred regarding the patient's injuries, problems and pre-hospital management. Different categories of both emergency care practitioners and healthcare professionals were involved in patient handovers. The data relating to this sub-theme is summarised in Table 4.4.

Table 4.4 Handover

Sub-theme	Category	Sub-category
Handover *(see Section 4.2.4)*	Language *(see Section 4.2.4.1)*	
	Inappropriate qualification *(see Section 4.2.4.2)*	
	From emergency care practitioner to nurse *(see Section 4.2.4.3)*	
	From emergency care practitioner to doctor if serious *(see Section 4.2.4.4)*	Doctor never present at handover
	Unstructured handover *(see Section 4.2.4.5)*	Verbal handover preferred
	Written handover *(see Section 4.2.4.6)*	
	Attentive listening by healthcare professionals *(see Section 4.2.4.7)*	
	History differs *(see Section 4.2.4.8)*	
	Repetition of handover *(see Section 4.2.4.9)*	
	Opportunity to pose questions to emergency care practitioner/family *(see Section 4.2.4.10)*	

The following notes from the observation tools support the study findings related to the sub-theme handover:

- *…Dr [doctor] not involved in verbal handover from CCA [advanced life support emergency care practitioner] to RN [professional nurse] followed by a written record and no specific structure identified…* (observation tool:19)
- *…Dr [doctor] not involved in verbal handover followed by a written record, unstructured handover, handover was done in English…* (observation tool:12)
- *…Dr [doctor] not involved in verbal handover followed by a written record, no specific structure used and RN [professional nurse] listened to handover, not performing other tasks…* (observation tool:14)
- *…Verbal handover was done by AEA [intermediate life support emergency care practitioner] to RN [professional nurse] and then given to dr. [doctor] by RN [professional nurse] …* (observation tool:8)

Discussion: Patient handover is defined as the transfer of responsibility and accountability from one healthcare professional to the next (Dawson, et al 2013:394; Jensen, et al 2013:964; Randell, et al 2011:803) and occurs once the patient arrives in the ED (Aase, et al 2011:1; Bost, et al 2010:216) between emergency care practitioners and healthcare professionals (Bruce & Suserud 2005:203; Dean 2012:7). This definition is also applicable in this study.

It is confirmed in the literature that on arrival of the patient in the ED the first contact between emergency care practitioners and healthcare professionals occurs through the patient handover. Through the patient handover the healthcare professional receives information to assist with forming a clinical picture of the patient's injury or problem (Bruce & Suserud 2005:203). The patient handover process ensures the transition of patient care from emergency care practitioners to healthcare professionals (from the pre- to the in-hospital environment) (Yong, et al 2008:150). Patient handovers occur on a daily basis in all EDs (Jensen, et al 2013:964) and it is important that they are carried out effectively. According to Calleja, et al (2011:5), the effective transfer of information from emergency care practitioners to healthcare professionals during patient handover will result in quality patient care delivery, which is the main aim of all patient handovers.

Ten main categories were identified as influencing the handover namely: language, inappropriate qualification, from emergency care practitioner (ECP) to nurse, from ECP to doctor, unstructured handover, written handover, attentive listening by healthcare professionals, history differs, repetition of handover, and opportunity to pose questions. Each category will be discussed individually in Sections 4.2.4.1 to 4.2.4.10.

4.2.4.1 Language

The first category identified by participants under the sub-theme handover was language. Participants stated that the patient handover should be done in a language understood by everyone involved, but identified that this was not always the practice. In three of the patient handovers observed, emergency care practitioners and healthcare professionals did not use English, which is the corporate language of the ED and the hospital.

The following notes from the observation tools support the study findings related to the category language:

- *…Handover done in English…* (observation tool:11)
- *…AEA [intermediate life support emergency care practitioner] used another language than English to do the handover which wasn't understandable to everyone present…* (observation tool:5)
- *…Language wasn't understandable by everyone in the unit. RN [professional nurse] spoke to EN [enrolled nurse] and BAA [basic life support emergency care practitioner] after which they changed to English…* (observation tool:7)
- *…Spoke English for all staff to understand…* (observation tool:9)
- *…BAA [basic life support emergency care practitioner] started handover in Sotho and …EN [enrolled nurse] asked to give handover in English…* (observation tool:10)

Discussion: With regard to this study, language refers to the spoken and written language the emergency care practitioner and the healthcare professional use

during the patient handover. According to Dawson, et al (2013:396), using a commonly understood language during the patient handover is important for the adequate flow of information. The flow of information is important for adequate patient handovers and quality patient care. However, Bost, et al (2010:216) admit that communication barriers do exist, perhaps because emergency care practitioners and healthcare professionals involved in patient handovers in the ED do not share a common language.

Owen, et al (2009:105) state that even a minor difference in language use can cause communication problems, as a result of which information can be lost and patient care can be negatively affected. If the meaning of the communication and the interpretation of the information given differ from the original intention, patient safety can also be affected. Cheung, et al (2009:4) and Laxmisan, et al (2007:807) support reports that language barriers exist during patient handovers in the ED.

Strategies relating to language

The participants suggested the following strategy relating to language that could be implemented in order to ensure that emergency care practitioners and healthcare professionals use the corporate language during patient handovers in the ED, thereby improving patient handovers:

- *Use corporate language during handovers.*

⇨ *Inappropriate qualification*

The second category identified under the sub-theme of handover was inappropriate qualification. Participants indicated that sometimes a patient handover was given to a person who was not appropriately qualified, which led to the patient handover having to be repeated and information being lost. In most of the patient handovers observed, emergency care practitioners handed the patient over to the enrolled nurse (EN) (healthcare professional). When the EN called the registered nurse (RN) (healthcare professional) the emergency care practitioners had to repeat the patient handover. This occurred in two of the observed patient handovers. In one instance

the emergency care practitioners presented the patient handover to a RN (healthcare professional) after which an EN (healthcare professional) had to be called to take over the patient.

The following notes from the observation tools support the study findings related to the category inappropriate qualification:

- *…Handover started and was stopped when the EN [enrolled nurse] called the RN [professional nurse] and handover continued…* (observation tool:15)
- *…EN [enrolled nurse] received patient and the RN [professional nurse] was called for the patient and handover started…* (observation tool:17)
- *…ENA [auxiliary nurse] who triaged the patient did not hear the handover, was given to RN [professional nurse] and the EN [enrolled nurse] treating the patient was never involved in handover…* (observation tool:12)
- *…RN [professional nurse] left after delegation from RN [professional nurse] in charge and arrival of EN [enrolled nurse] and handover started…* (observation tool:2.1)

Discussion: With regard to this study, a staff member who is inappropriately qualified refers to a staff member that does not have a qualification that is appropriate for receiving a particular category of patient handed over by the emergency care practitioner in the ED. According to Evans, Murray, Patrick, Fitzgerald, Smith, Cameron (2010:3) and Dawson, et al (2013:397), emergency care practitioners regard handing over a patient to appropriate personnel as an important factor in achieving a good patient handover and ensuring quality care. Jensen, et al (2013:966) adds that emergency care practitioners often find they have to repeat a patient handover because it has been given to inappropriate qualified personnel. Such repetitions of the patient handover can lead to information loss.

Strategies relating to inappropriate qualification
The participants suggested the following strategy relating to inappropriate qualification that could be implemented in order to ensure that patient handovers are

given to the most appropriate personnel from the beginning, in that way improving patient handovers:

- *The shift leader must allocate the correct nurse before a handover is done.*

4.2.4.3 From emergency care practitioner to nurse

The third category identified under the sub-theme handover was the handover that takes place from the emergency care practitioner to the nurse. Participants indicated that in most cases emergency care practitioners handed patients over to nurses in the ED. Out of the 20 handovers observed, 16 were between the emergency care practitioners and nurses. In this study, handovers of patients triaged as orange or yellow category patients were observed, and as these patients had non-urgent problems or injuries a doctor was not always involved in the patient handover.

The following notes from the observation tools support the study findings related to the category from emergency care practitioner to nurse:

- *…Verbal handover from BAA [basic life support emergency care practitioner] to RN [professional nurse]…* (observation tool:9)
- *…Verbal handover given by AEA [intermediate life support emergency care practitioner] to RN [professional nurse]…* (observation tool:18)
- *…Verbal handover from BAA [basic life support emergency care practitioner] to EN [enrolled nurse]…* (observation tool:15)
- *…Verbal handover done by BAA [basic life support emergency care practitioner] to RN [professional nurse]…* (observation tool:12)

Discussion: Ainsworth-Smith (2012:4) defines an emergency care practitioner as a healthcare provider who has the necessary knowledge, skills and attitude to deliver holistic care in a pre-hospital environment. Emergency care practitioners can be employed in a wide variety of settings and they ultimately report to their team leader. In various other studies, emergency care practitioners are also referred to as paramedics (Dawson, et al 2013:396; Dean 2012:7; Yong, et al 2008:151).

In the Bailliere's Nurses' Dictionary (Weller 2001:280) a nurse is defined as a person who is qualified in the science of nursing, has passed the requirements for the course and is registered with a registration body. Nurses provide preventative, curative and rehabilitative care to people. With regard to this study, in this category patient handover occurred between emergency care practitioners and the nurses in the ED. In the literature, patient handovers are described as an integral part of the daily activities in the ED (Picton 2011:3) that occur mainly between the emergency care practitioners and nurses (Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al 2010:461). Bruce and Suserud (2005:203) describe the ideal patient handover as one which involves the emergency care practitioner, the nurse and the patient. Dawson, et al (2013:393) also confirms that most patient handovers in the ED occur between emergency care practitioners and nurses and not between emergency care practitioners and doctors. According to Yong, et al (2008:151), 97% of triage nurses and 91% of attending nurses receive patient handovers from emergency care practitioners in the ED.

Strategies related to from emergency care practitioner to nurse
No strategies were suggested by the participants for the category called from emergency care practitioner to nurse to improve patient handovers in the ED.

4.2.4.4 From emergency care practitioners to doctor if serious
The fourth category identified under the sub-theme handover is called from emergency care practitioners to doctor if serious. Participants indicate that if a patient's condition was serious (triaged red) a doctor would be involved in the patient handover. This was the case in four of the patient handovers observed.

The following notes from the observation tools support the study findings related to the category from emergency care practitioners to doctor if serious:

- *…Dr [doctor] arrived after RN [professional nurse] asked ENA [auxiliary nurse] to call doctor due to patient condition – orange category patient…* (observation tool:17)
- *…Dr [doctor] joined handover, orange category patient…* (observation tool:1.1)
- *…Dr [doctor] arrived later, orange category patient …*(observation tool:9)

Discussion: In South Africa, a doctor must be registered with the Health Professions Council of South Africa (South Africa 2003). With regard to this study, the category called from emergency care practitioner to doctor if serious refers to a patient handover from the emergency care practitioner to both the nurse and the doctor if the condition of a patient is more serious. The literature confirms that patient handovers occur between the emergency care practitioner and the doctor if the patient's condition is serious. In a study conducted by Yong, et al (2008:151) they found that only 12% of patient handovers from emergency care practitioners to healthcare professionals in the ED was referred to doctors. Doctors were only involved in the patient handovers of patients who were triaged as red category patients because their conditions were serious. In 5% of these cases the doctor and nurses were present simultaneously, and in these cases improved patient safety and patient care were evident (Yong, et al 2008:151). The finding of Picton (2011:3) and Owen, et al (2009:103) was that patient handovers in the ED occur between emergency care practitioners and healthcare professionals, which included both doctors and nurses.

According to Sujan and Spurgeon (2013:[2]) and Evans, Murray, Patrick, Fitzgerald, Smit, Andrianopoulus, et al (2010:461), the handover of patients from emergency care practitioners to either the doctor or nurses depends on the severity of the patient's condition. Dawson, et al (2013:401) reaches the same conclusion and states that patient handovers are usually given from emergency care practitioners to nurses but are repeated to the doctor in more serious cases. In their study, both the doctor and the nurse received the patient handover in 89% of the patient handovers.

Strategies relating to from emergency care practitioner to doctor if serious

No strategies were suggested by the participants relating to the category called from emergency care practitioner to doctor if serious in order to improve patient handovers in the ED.

One sub-category was identified relating to handover from emergency care practitioner to doctor namely: doctor never present at handover which are now discussed.

⇨ *Doctor never present at handover*

The sub-category called doctor never present at handover was identified by the participants under the category called from emergency care practitioner to doctor if serious. Participants noted that the doctor was never present at most of the patient handovers (a total of 20) that were observed. These patient handovers were conducted on patients who were triaged as yellow category patients; therefore, their conditions were less serious or urgent and a doctor was not needed.

The following notes from the observation tools support the study findings related to the sub-category doctor never present at handover:

- *…Dr [doctor] not involved, busy with other patients…* (observation tool:16 and 11)
- *…Dr [doctor] not involved in handover…* (observation tool:19)
- *…Dr [doctor] only arrived after patient handover was done…* (observation tool:8)
- *…Dr [doctor] not part of handover; came and then left again…* (observation tool:2.2)

Discussion: With regard to this study, the sub-category called the doctor never present at handover refers to the fact that the doctor was almost never present at the patient handovers observed in the ED. The literature confirms that a doctor is never present at a patient handover when a patient is triaged as a yellow or a green category patient. According to Dawson, et al (2013:393) and Bruce and Suserud

(2005:203), nurses receive most of the patient handovers from emergency care practitioners, and doctors are not involved.

Yong, et al (2008:151) report that most of the patients arriving by ambulance and handed over by emergency care practitioners are green or yellow category patients whose conditions are less serious. Doctors are only involved in the patient handovers of red category and orange category patients whose conditions are more serious. In addition, Jensen, et al (2013:966) found in their study that emergency care practitioners reported that in 79% of all patient handovers the doctor was not present at the initial patient handover. In conclusion it can be said that doctors are not involved in most patient handovers.

Strategies relating to doctor never present at handover

No strategies were suggested by participants relating to the sub-category doctor never present at handover in order to improve patient handovers in the ED.

4.2.4.5 Unstructured handover

The fifth category identified by participants under the sub-theme of handover was unstructured handover. Participants identified that all 20 patient handovers observed in the ED between emergency care practitioners and healthcare professionals were not done according to a specific structure and was therefore unstructured. During two of the observations the researcher had a discussion with two of the emergency care practitioners and inquired if they were taught how to conduct a patient handover during their training, to which they replied that they did not get any official training.

The following notes from the observation tools support the study findings related to the category unstructured handover:

- *…No specific structure followed…* (observation tool:18)
- *…Unstructured handover…* (observation tool:3)
- *…No specific structure used…* (observation tool:14)
- *…No specific structure identified…* (observation tool:19)

Discussion: In terms of this study, unstructured handover refers to the lack of structure of patient handovers in the ED as implemented by emergency care practitioners. This lack of structure of patient handovers conducted in the ED is confirmed in most literature sources. The patient handovers discussed in these sources are mainly concerned with those between emergency care practitioners and healthcare professionals (Cheung, et al 2009:4; Dawson, et al 2013:401; Delupis, Mancini, Ruggeri and Pisanelli 2016:4; Delupis, et al 2014:577; Sadri, et al 2014:37; Yong, et al 2008:150). Despite the knowledge and availability of multiple mnemonics relating to patient handover, these tools are still not used (Sadri, et al 2014:37).

Unstructured patient handovers make effective communication difficult (Cheung, et al 2009:4) and lead to varying degrees of information transmission during patient handovers (Yong, et al 2008:150). Therefore, Bost, et al (2010:215), Calleja, et al (2011:13), Dawson, et al (2013:401), Jensen, et al (2013:966), Manser, Foster, Gisin, Jaeckel and Ummenhofer (2010:1) and Owen, et al (2009:103) all suggest that a structured patient handover tool needs to be used during patient handovers between emergency care practitioners and healthcare professionals in the ED. Delupis, et al (2014:580) point out that both emergency care practitioners and healthcare professionals agree about the need for patient handovers to be structured. In a study done by Sadri, et al (2014:41) it was evident that structured patient handovers had a positive effect on the quality of the patient handovers conducted. After using the ABCDE mnemonic to conduct the patient handovers an improvement in the patient handover quality was seen.

Strategies relating to unstructured handover

The participants suggested the following strategies relating to the category unstructured handover that could be implemented to ensure that patient handovers are done in a structured manner and, therefore, that patient handovers are improved:

- *Follow a specific structure when doing a handover.*

- *Try to incorporate a specific form to be used by ambulance personnel so that handovers can be done in a structured manner.*
- *Handovers must be in a structured format.*
- *Reach consensus on the structured handover process.*

One sub-category was identified relating to unstructured handover from emergency care practitioner to healthcare professionals namely: verbal handover preferred which are now discussed.

⇨ **Verbal handover preferred**

Verbal handover preferred was the only sub-category identified under unstructured handover. Participants indicated that although patient handovers were unstructured, a verbal handover was always followed. All 20 patient handovers observed were done in a verbal manner.

The following notes from the observation tools support the study findings related to the sub-category verbal handover preferred:

- *…Verbal handover done at the bedside…* (observation tool:2.1)
- *…RN [professional nurse] took verbal handover from BAA [basic life support emergency care practitioner]…* (observation tool:9)
- *…Verbal handover from BAA [basic life support emergency care practitioner] to EN [enrolled nurse]…* (observation tool:10)
- *…Verbal patient handover given from CCA [advanced life support emergency care practitioner] to RN [professional nurse]…* (observation tool:19)
- *…Verbal handover given by AEA [intermediate life support emergency care practitioner] to RN [professional nurse]…* (observation tool:18)

Discussion: A patient handover is defined as the transfer of responsibility and accountability from emergency care practitioners to healthcare professionals (Dawson, et al 2013:394; Jensen, et al 2013:964; Randell, et al 2011:803; Bruce & Suserud 2005:203; Dean 2012:7) when the patient arrives in the ED (Aase, et al

2011:1; Bost, et al 2010:216). With regard to this study, a verbal handover refers to the observed verbal patient handover between emergency care practitioners and healthcare professionals in the ED. Apart from verbal patient handovers being done in the ED between emergency care practitioners and healthcare professionals, these handovers also occur in other healthcare settings (for instance, in wards and theatres) where, according to reports, verbal patient handovers are also the preferred method for information translation (in particular during shift changes (Johnson, Sanchez, Basilakis, Dawson, Kelly and Hanlen 2014:75; Ong & Coiera 2011:274; Randell, et al 2011:804; Wilson 2011:23).

Findings in the literature confirm that patient handovers always occur verbally. According to Cheung, et al (2009:5), Dawson, et al (2013:396), Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al (2010:462), Kilner and Sheppard (2010:128), Picton (2011:3) and Yong, et al (2008:153), patient handovers in the ED are usually done verbally (face to face) between emergency care practitioners and healthcare professionals. Kilner and Sheppard (2010:134) confirm that it is the most common type of patient handover used in the ED. Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al (2010:462) state that patient handovers are comprehensive and adequate when emergency care practitioners do them verbally (face to face). This is also the reason Yong, et al (2008:151) give for explaining that a verbal patient handover always precedes a written record.

Strategies relating to verbal handover preferred

No strategies were suggested by participants relating to the sub-category verbal handover preferred in order to improve patient handovers in the ED.

4.2.4.6 Written handover

The sixth category identified under the sub-theme handover was that of written handover. Participants indicated that in 14 of the patient handovers observed, a written record was handed over immediately after the verbal patient handover, which indicated that it was captured by the emergency care practitioner during transfer of the patient to the ED. Participants agreed that this was the best practice in the ED

and that it should be continued. However, in two of the patient handovers observed the written records only followed 10 to 15 minutes after the verbal patient handover had been done.

The following notes from the observation tools support the study findings related to the category written handover:

- *…Verbal handover followed by a written record given immediately after verbal as asked for by RN [professional nurse]…* (observation tool:13)
- *…Verbal handover followed up by a written record given immediately…* (observation tool:2.2, 10 and 14)
- *…Written record given by AEA [intermediate life support emergency care practitioner] after verbal handover…* (observation tool:18)

Discussion: A patient handover involves the transfer of responsibility and accountability from one healthcare professional to the next (Dawson, et al 2013:394; Jensen, et al 2013:964; Randell, et al 2011:803) and occurs between emergency care practitioners and healthcare professionals (Bruce and Suserud 2005:203; Dean 2012:7) when the patient arrives in the ED (Aase, et al 2011:1; Bost, et al 2010:216). With regard to this study, a written handover refers to the written document submitted by emergency care practitioners to healthcare professionals once the verbal patient handover has been done. This written document summarises the treatment that emergency care practitioners in the pre-hospital environment have given.

The transfer of both verbal and written information in patient handover is very important in order to provide a complete patient handover (Bost, et al 2010:215; Bruce and Suserud 2005:203). A verbal handover between emergency care practitioners and healthcare professionals is considered complete once the care of and the responsibility for the patient are transferred to the healthcare professional, but the information transferred can be forgotten and lost forever once the emergency care practitioner has left the ED. However, a written record will remain and can be

used by healthcare professionals to refer back to at a later stage (Calleja, et al 2011:15; Dawson, et al 2013:402). It is, therefore, important that a complete written record be submitted after a verbal patient handover and kept for reference (Manias, Geddes, Watson, Jones, and Della 2015:88; Murray, et al 2012:25). A written record was also found to be important by Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al *(*2010:462) because when doing the data analysis of their study they found that not all information documented had been handed over by emergency care practitioners to healthcare professionals in the ED. With written record healthcare professionals were still able to receive the information not handed over verbally. According to Evans, Murray, Patrick, Fitzgerald, Smith, Andrianopoulus, et al (2010:460), written documents are not always provided immediately after the verbal patient handover and healthcare professionals sometimes need to wait for some time before they are provided with the written document.

Strategies relating to written handover

The participants suggested the following strategies relating to written handover that could be implemented in order to ensure that verbal patient handovers are always followed up by written records and that patient handovers can be improved:

- *All patient handovers must be verbal and must be followed up with a completed written record.*

4.2.4.7 Attentive listening by healthcare professionals

The seventh category identified under the sub-theme handover was that of attentive listening. Participants indicated that in most cases nurses listened attentively to patient handovers given by emergency care practitioners whereas the doctor did not always listen attentively. Participants expressed the opinion that attentive listening by all healthcare professions should always be the practice.

The following notes from the observation tools support the study findings related to the category attentive listening by healthcare professionals:

- *…Nursing staff [healthcare professionals] was writing everything that was said down and listened attentively…* (observation tool:2.1)
- *…EN [enrolled nurse] busy treating patient while RN [professional nurse] listened to handover…* (observation tool:5)
- *…AEA [intermediate life support emergency care practitioner] spoke audibly with RN [professional nurse] listening…* (observation tool:6)
- *…RN [professional nurse] listened to handover, not performing other tasks…* (observation tool:14)
- *…It seemed as if RN [professional nurse] was listening attentively…* (observation tool:3)

Discussion: With regard to this study, attentive listening refers to the attentive listening of healthcare professionals to the information shared during the patient handovers given by emergency care practitioners. As far back as 2005, Bruce and Suserud (2005:203) confirmed the importance for healthcare professionals to listen attentively when emergency care practitioners conducted patient handovers. The finding in a study done by Owen, et al (2009:104) in an ED in Australia was that this practice was not always observed. According to Dawson, et al (2013:396), Delupis, et al (2014:580), Evans, Murray, Patrick, Fitzgerald, Smith, Cameron (2010:3) and Jensen, et al (2013:966), lack of attentive listening occurs when healthcare professionals start to perform activities during the patient handover and do not listen to the whole patient handover. Healthcare professionals in an ED have many tasks to perform and concentrate on, and listening attentively might be a challenge in the busy ED environment. Emergency care practitioners on the other hand have only one priority, which is the patient handover (Owen, et al 2009:104). If healthcare professionals do not listen attentively to the patient handover, information can be missed and even lost and patient handovers may have to be repeated (Bost, et al 2010:212), which can lead to the emergency care practitioner becoming frustrated.

Strategies relating to attentive listening by healthcare professionals

The participants suggested the following strategies relating to attentive listening by healthcare professionals that can be implemented in order to ensure that patient handovers in the ED improve:

- *The doctor and nursing staff should listen attentively to the complete handover if the patient's condition is not life-threatening.*
- *All involved should pay attention.*

4.2.4.8 History differs

The eighth category identified under the sub-theme handover was that of history differs. Participants identified that the history of the patient's injury/problem recorded by the emergency care practitioner who had handed the patient over sometimes differed from the history provided by the patient and the family. In some instances the patient or the family provided more information than that which had been provided during the handover. In four of the patient handovers observed more information was received from the patient during history-taking than that which had been handed over by the emergency care practitioners.

The following notes from the observation tools support the study findings related to the category history differs:

- *…More info was gotten from patient than what was handed over…* (observation tool:15)
- *…RN [professional nurse] asked history from patient from which she got more information…* (observation tool:11)
- *…RN [professional nurse] spoke to patient and more info was received than what was handed over…* (observation tool:8)
- *…Information given by patient was more or less the same, but extra information added…* (observation tool:14)

- *…Second time not all information was given than what was given the first time…* (observation tool:9)

Discussion: In terms of this study, history that differs refers to the difference between the information the emergency care practitioners provide on the patient and the information the nurse (and even the doctor) receives from the patient. Existing research confirms that in some instances there is a difference in the quantity and quality of the information about a patient's history that the emergency care practitioners and the healthcare professionals transfer (Bost, et al 2010:216; Kilner and Sheppard 2010:128). According to a study done by Bruce and Suserud (2005:205), questions posed to the patient revealed different information to that which the emergency care practitioner provided, perhaps owing to incomplete patient histories taken and provided by emergency care practitioners. When the healthcare professionals asked the patient questions, more or different information was received (Kilner and Sheppard 2010:128).

Strategies relating to history differs

No strategies were suggested by participants relating to the category history differs in order to improve patient handovers in the ED.

4.2.4.9 Repetition of handover

The ninth category identified under the sub-theme handover was that of repetition of handover. Participants indicated that patient handovers in the ED were often repeated. In five of the 20 patient handovers observed the patient handover had to be repeated. One of the reasons for this repetition was because the doctor was not present at the beginning of the patient handover and when the doctor did arrive he or she expected the emergency care practitioner to start over again. The second reason was that healthcare professionals started patient treatment during the handover instead of listening attentively to the information transferred by the emergency care practitioner, as a result of which they had to ask for information that had already been shared. The emergency care practitioner then had to repeat the

patient handover. Information loss was observed when the patient handover was repeated and the information mentioned was not the same.

The following notes from the observation tools support the study findings related to the category repetition of handover:

- *…Repeated handover to EN [enrolled nurse] and then dr [doctor]…* (observation tool:1)
- *…Some info needed to be repeated to dr [doctor] due to this…* (observation tool:1)
- *…BAA [basic life support emergency care practitioner] gave handover to RN [professional nurse] and when dr [doctor] arrived had to repeat handover again…* (observation tool:9)
- *…BAA [basic life support emergency care practitioner] started with handover and stopped to transfer patient to the bed and then AEA [intermediate life support emergency care practitioner] started with the handover again…* (observation tool:8)
- *…BAA [basic life support emergency care practitioner] gave handover to RN [professional nurse], but when dr [doctor] arrived had to repeat handover again …* (observation tool:9)

Discussion: With regard to this study, repetition of handover refers to the emergency care practitioner providing the patient handover to the healthcare professionals more than once. The literature confirms that patient handovers in the ED tend to be repeated (Bost, et al 2010:212; Dawson, et al 2013:401; Jensen, et al 2013:966; Owen, et al 2009:105). The repetition of a patient handover can result in information being changed or getting lost from one patient handover to the next (as was evident in this study). The abovementioned authors mention that sometimes emergency care practitioners have to repeat the same patient handover three times, which makes it difficult for them to provide consistent information. The view is expressed that if all healthcare professionals are present at a patient handover no repetitions will be necessary as everyone will receive the same information at once

(Dawson, et al 2013:401). According to Jensen, et al (2013:966), Bost, et al (2010:212) and Owen, et al (2009:105), more information is lost with every repetition of the patient handover. Repetition of patient handovers furthermore results in fragmented communication which also causes information loss and which, in turn, can influence patient safety negatively (Jensen, et al 2013:966).

Strategies relating to repetition of handover

The participants did not suggest any specific strategies relating to repetition of handover in order to improve current patient handovers.

4.2.4.10 Opportunity to pose questions to emergency care practitioners / family

The last category identified under the sub-theme handover was the opportunity to ask the emergency care practitioner or family questions. Participants indicated that there were opportunities to ask the emergency care practitioner and/or family questions during and after the patient handover in order to clarify any uncertainties. In six of the patient handovers observed the healthcare professionals asked the emergency care practitioners or the family questions to obtain more information or to clarify information.

The following notes from the observation tools support the study findings related to the category opportunity to pose questions to emergency care practitioner / family:

- *…RN [professional nurse] confirmed signs and symptoms as well as the onset with patient…* (observation tool:5)
- *…RN [professional nurse] then asked the times of medication given, dosages, allergies and medical history from CCA [advanced life support emergency care practitioner]…* (observation tool:19)
- *…RN [professional nurse] also asked BAA [basic life support emergency care practitioner] questions to clarify info…* (observation tool:15)
- *…RN [professional nurse] asked onset of symptoms and current medication from BAA…* (observation tool:11)

- *…When family arrived EN [enrolled nurse] asked them some questions…* (observation tool:16)

Discussion: According to a study carried out by Poot, et al (2014:169), staff asked questions after patient handovers to clarify information (as was the case in the current study). However, Tidwell, et al (2011:E1) point out that as a family is rarely involved in the patient handover process, healthcare professionals do not have the opportunity to ask them questions during the patient handover. The opinion is expressed that should the family be involved in the patient handover they will have the opportunity to provide more information (Bruce and Suserad 2005:205; Tidwell, et al 2011:E3).

Strategies relating to the opportunity to pose questions to emergency care practitioners / family

The participants suggested the following strategies that could be implemented in order to ensure that healthcare professionals are provided with the opportunity to pose questions to either the emergency care practitioner or the family and in that way to improve patient handovers and to help retain patient information:

- *Ask the family questions when information is unclear or inadequate.*
- *Ask the family for information when the patient is unable to provide it.*
- *Before they leave, emergency care practitioners must ask healthcare professionals if they have any questions.*

4.2.5 Sub-theme 4: Confidentiality

The fourth and final sub-theme identified by the participants during the data analysis session was confidentiality. Participants indicated that confidentiality during the patient handover between emergency care practitioners and healthcare professionals in the ED was very important, but also very challenging. The layout of the ED (especially the five bedded area) made confidentiality almost impossible to maintain. It was observed that the main way in which emergency care practitioners

and healthcare professionals tried to maintain confidentiality was to talk softly during the patient handover.

The following notes from the observation tools support the study findings related to the category confidentiality:

- *…BAA [basic life support emergency care practitioner] spoke softly maybe due to wanting to maintain patient info confidential…* (observation tool:12)
- *…AEA [intermediate life support emergency care practitioner] spoke softly during the handover…* (observation tool:3)
- *…BAA [basic life support emergency care practitioner] talking softly during handover…* (observation tool:15)
- *…AEA [intermediate life support emergency care practitioner] also spoke very softly maybe due to confidentiality and privacy in the five-bed area…* (observation tool:5)

Discussion: It is stated in the Patients' Rights Charter (Department of Health 2014) that all patients have the right to confidentiality and that all healthcare professionals should treat patient information as confidential. With regard to this study, confidentiality refers to maintaining the confidentiality of patient information during patient handovers in the ED. In the literature it is confirmed that is very important for emergency care practitioners and healthcare professionals to maintain confidentiality regarding patient information. This keeping of confidentiality must start the moment the emergency care practitioners pick up the patient, and continue during patient handover in the ED and beyond (Bruce and Suserud 2005:204). Some of the factors researchers identify as making it difficult to maintain patient confidentiality in the ED are: the busy ED environment (Kerr, et al 2013:1686) and the layout of the ED (Anderson, et al 2014:666). Confidentiality is difficult to maintain when patients are in an area containing five beds with only a curtain to separate them. Since maintaining confidentiality in the ED is so difficult it is of big concern to all emergency care practitioners and healthcare professionals (Anderson, et al 2014:666; Kerr, et al 2013:1686).

Strategies relating to confidentiality

No strategies were suggested by participants relating to the sub-theme confidentiality in order to improve patient handovers in the ED.

4.3 SUMMARY

In chapter 4, the research findings identified collaboratively between the participants and the researcher during the study's data analysis process were discussed in detail. The discussion focussed on the main overarching theme, namely communication, and on the four other sub-themes (namely, disrespect, environment, handover and confidentiality) and their categories and subcategories. Support for the findings was provided in the form of references to relevant literature sources. In chapter 5 the recommendations based on the research will be discussed in terms of the theme and related sub-themes. Suggestions for future research and a reference to the limitations of the current study will be made. In conclusion, a personal reflection on the study by the researcher will be given.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

5.1 INTRODUCTION

In Chapter 4, the research findings were discussed and an in-depth review of the applicable literature was presented. The research findings were based on the collaborative data analysis conducted by the participants and the researcher from the data obtained during the observations of patient handovers between emergency care practitioners and healthcare professionals in the selected ED. Chapter 5 presents the conclusions and recommendations related to the two research questions identified for the study, and will end with limitations of the study as well as a personal reflection from the researcher.

5.2 RESEARCH QUESTIONS

The two research questions derived from the problem statement were:

- What are the current patient handover practices from emergency care practitioners to healthcare professionals in a selected emergency department?
- Which strategies can be identified to improve patient handover practices from emergency care practitioners to healthcare professionals in a selected emergency department?

The conclusions relating to current patient handover practices and the strategies identified to improve patient handover practices in the ED will be discussed simultaneously to simplify the discussion. Recommendations relating to the overarching theme and related sub-themes identified during the data analysis session will then follow.

5.3 CONCLUSIONS AND RECOMMENDATIONS

Patient handover practices were observed over a period of four weeks (see Chapter 3, Section 3.4.3) and a total of 20 patient handovers (see Chapter 3, Section 3.4.3, Phase 1) was observed. The data obtained was analysed by means of the hermeneutic data analysis method (see Chapter 3, Section 3.4.3, Phase 5) during a data analysis session attended by nine people namely the researcher and two supervisors, four healthcare professionals and two emergency care practitioners. The session was led by the experienced supervisors who guided the data analysis and strategy planning processes. Subsequent to these processes, strategies for each identified sub-theme (see Chapter 3, Section 3.4.3, Phase 5) were developed in collaboration with the participants.

The conclusions reported on in this chapter were based on the data obtained during the participant observations (see Chapter 3, Section 3.4.3) and the creative hermeneutic analysis of the data (see Chapter 3, Section 3.4.3, Phase 5). A central theme, namely that of communication, was identified and this theme is discussed in section 5.3.1.

5.3.1 Overarching theme: Communication

Communication was identified as the central theme. The participants were of the opinion that without communication a patient handover (which is a form of communication) and the concurrent transfer of information could not occur, and, therefore the information would be lost. The participants reached consensus that communication was the essence of patient handover practices and that it should be a stand-alone theme and discussed separately.

Communication is the most important component of human interaction and is necessary for the transfer of information from a sender to a receiver. If communication does not occur, information will not be transferred, leading to information loss. During observation in the ED the focus remained on verbal communication and transfer of information that occurred between emergency care

practitioners and healthcare professionals during all patient handovers. Communication started as soon as the emergency care practitioners entered the ED and was concluded when the emergency care practitioners asked if there was anything else the healthcare professionals needed to know before they left. It was observed that although healthcare professionals and emergency care practitioners strived to achieve effective communication during patient handovers (see Chapter 4, Section 4.2.1), communication was less effective in some instances, which influenced patient handover negatively (see Chapter 4, Section 4.2.1).

5.3.1.1 Strategies

No specific strategies were identified by the participants relating to communication.

5.3.1.2 Recommendations

Emergency care practitioners and healthcare professionals should strive for effective communication during patient handovers.

The following are recommendations relating to communication:

- Effective communication is a vital skill that all emergency care practitioners and healthcare professionals should possess to ensure quality in patient handover practices.
- Communication between emergency care practitioners and healthcare professionals should be clear, audible and in a language everyone understands.

Four additional sub-themes that were related to the central theme were identified, namely:

- Disrespect
- Environment
- Handover
- Confidentiality

A concluding discussion of each of the sub-themes is presented in sections 5.3.2 to 5.3.5.

5.3.2 Sub-theme 1: Disrespect

Disrespect was the first sub-theme identified by participants as being evident in patient handovers occurring in the ED. In this section this sub-theme is reviewed, after which the strategies (Section 5.3.2.1) and recommendations (Section 5.3.2.2) related to it are stated. Disrespect was evident in the majority of the patient handovers observed between emergency care practitioners and healthcare professionals in the ED. Such disrespect can have a negative influence on the patient handover as well as on communication. Three categories were identified under the sub-theme of disrespect, namely, disrespect among pre-hospital personnel (emergency care practitioners) and in-hospital personnel (healthcare professionals), the isolation of patients from patient handovers, and the isolation of family members from patient handovers (see Chapter 4, Section 4.2.2).

It was identified that the disrespect shown among pre-hospital personnel (emergency care practitioners) and in-hospital personnel (healthcare professionals) was part of current practice. The occurrence of disrespect could be ascribed to the fact that the handover of patients occurs between people from two different environments (emergency care practitioners from the pre-hospital environment and healthcare professionals from the in-hospital environment). These two environments are different not only because their categories of personnel are different but also because the priorities and the work ethics of these personnel are different. Nevertheless, it is important that they work together and treat each other with respect in order to ensure continuity of patient care. The forms of disrespect that participants identified between emergency care practitioners and healthcare professionals were that emergency care practitioners did not greet healthcare professionals and did not report at the duty station on arrival in the ED. The category of disrespectful behaviour between specifically emergency care practitioners and healthcare professionals was not reported previously in the literature and was, therefore, unique to this study.

Two subcategories under the category of disrespect among pre-hospital personnel (emergency care practitioners) and in-hospital personnel (healthcare professionals) were identified, namely: unfocussed personnel and barriers to communication (see Chapter 4, Sections 4.2.2.1.1 and 4.2.2.1.2).

With regard to unfocussed personnel it was observed that healthcare professionals often did not focus on the patient handover, partly because they were busy with other activities during the patient handover, such as patient treatment, interviewing the patient and talking to each other. This was seen as a re-current disrespectful challenge in the ED.

With regard to barriers to communication, it was observed that healthcare professionals closed the curtains around patients' beds while emergency care practitioners were still busy with verbal patient handovers, leaving the emergency care practitioners outside the curtain and excluding them. This action created a barrier between the emergency care practitioners and the healthcare professionals and also led to information being lost during the patient handover. Although the intention of the healthcare professionals could have been closing the curtains to give the patients some privacy and not necessarily to exclude the emergency care practitioners, the emergency care practitioners could regard this action as disrespectful. This specific type of barrier to communication was not found in other literature and therefor unique to this study.

Patient isolation from the patient handover occurred in the majority of patient handovers (see Chapter 4, Section 4.2.2.2). Even patients who were awake and alert were not included in the patient handover. Most patient handovers occur at patients' bedsides and if patients are excluded from the process they may feel they are being ignored. The participants identified this exclusion as a sign of disrespect towards the patient. Furthermore, by isolating the patients from the patient handovers, patients were not given the opportunity to clarify unclear information or add more information. It was found that patients often interrupted the patient

handover process to ask questions and add information, revealing their eagerness to be part of the patient handover process.

During observations it was found that families were also isolated from the patient handover (see Chapter 4, Section 4.2.2.3), and that they were even asked to leave the patient's bedside before the patient handover started. Family members who were isolated from and not included in the patient handovers, continued to interrupt the patient handovers by entering the room and asking questions. If the family is included in the patient handover process it could lead to more information being obtained or clarified, especially in instances where the patient is unable to speak. Including the patient and the family could also increase the satisfaction they experience during their visit to the ED.

5.3.2.1   Strategies

The strategies related to disrespect that were identified during the creative hermeneutic data analysis session were:

- The relationship between emergency care practitioners and healthcare professionals should be characterised by mutual trust and respect.
- Emergency care practitioners and healthcare professionals should greet each other in a friendly manner when entering the ED.
- Emergency care practitioners and healthcare professionals should treat the members of the multi-disciplinary team, the patients and the family with respect.
- During handovers, healthcare professionals should focus on and take note of what the emergency care practitioners are communicating.
- One healthcare professional should be allocated to concentrate on the patient handover while other healthcare professionals should start with patient treatment.
- Healthcare professionals should not close the curtain around the patient's bed and exclude the emergency practitioners when they are still busy with the patient handover.
- Both the patient and the family should be included in the patient handover process.

- The patient and/or the family should be asked questions to get more information relevant to the current problem.

5.3.2.2 Recommendations

The following recommendations were made relating to the sub-theme of disrespect and its categories and sub-categories:

- When emergency care practitioners enter the ED they should report at the duty station so as to make healthcare professionals aware of their presence and give them time to find an available bed for the patient.

- When emergency care practitioners enter the ED, both the emergency care practitioners and the healthcare professionals should show respect and create a friendly atmosphere by greeting each other.

- Both emergency care practitioners and healthcare professionals should speak to and treat each other with respect.

- Emergency care practitioners and healthcare professionals should take the time to become familiar with one another's environments so that they can understand and respect these environments.

- Healthcare professionals should focus on the patient handover while it is being done and not perform other non-life-threatening interventions during the patient handover.

- When healthcare professionals close the curtain around a patient's bed they should make sure that they do not exclude the emergency care practitioners.

- Patient handovers should be performed at the patient's bedside in order to include the patient in the patient handover and promote patient-centred handover practices in the ED.

- At least one family member should be allowed to be present during the patient handover.

5.3.3 Sub-theme 2: Environment

Environment was the second sub-theme identified by participants as being evident in patient handovers occurring in the ED. In this section a concluding review of this

sub-theme is presented, after which the strategies (Section 5.3.3.1) and recommendations related to it (Section 5.3.3.2) are stated.

The ED environment can be busy and chaotic. Several activities occur simultaneously, contributing to healthcare professionals being extremely busy and having to multi-task. Two categories, namely distractions and interruptions (see Chapter 4, Sections 4.2.3.1 and 4.2.3.2), were identified as environmental factors that made the ED even busier and that influenced the effectiveness of patient handovers.

During the 20 patient handovers observed in the ED (17 of which occurred at the patient's bedside and three in the hallway and the triage room), several distractions were observed, namely traffic, increased activities, monitors, people and family walking about and high noise levels. In the ED environment these distractions and activities occurred during patient handovers and influenced the effectiveness thereof. Due to the location and the layout of the ED there was a lot of traffic, with healthcare professionals, allied workers, family and visitors walking in and out of the area. When the healthcare professionals started with the treatment of patients the activities in the ED increased even more. Most patients admitted to the ED are connected to cardiac monitors and as these monitors are noisy they can distract those busy with the patient handover. High noise levels in the ED are a big distraction as noise prevents emergency care practitioners and healthcare professionals from communicating and listening effectively, therefore, from transferring information effectively. When emergency care practitioners and healthcare professionals get distracted from the patient handover process, information might be missed (not heard), never transferred or forgotten.

It was identified that interruptions in the ED also had an influence on patient handovers. Some of these interruptions were staff questions, patient treatment, multi-tasking and the doctor's behaviour. Healthcare professionals asked the emergency care practitioners and the patients' questions during patient handover, causing the process to be interrupted. Questions were asked mostly to confirm

information or find out more, and although the intention was not to interrupt, the patient handover was often stopped to provide the required information. These interruptions were observed to cause loss of information. Sometimes a patient handover had to be repeated, and it was found that the information transferred during a repetition was either less than or different to the information provided during the first patient handover.

Patient treatment occurring parallel to the patient handover was also a cause of interruption to the patient handover. Healthcare professionals started with patient treatment before the patient handover was done, as a consequence they did not concentrate on the patient handover and had to ask questions about matters that had already been dealt with in the patient handover. During multi-tasking, the act of doing usually takes priority over the act of listening, which leads to information loss. Lastly the doctor's behaviour during patient handover caused the process to be interrupted. The doctor often arrived after the patient handover had started and then either interrupted the process by asking questions relating to information that had already been communicated by the emergency care practitioner or by starting to perform patient treatment during the handover process.

5.3.3.1 Strategies

The strategies related to the environment that were identified during the creative hermeneutic data analysis session were:

- Traffic in the unit should be decreased by making sure visitors use the right entrances.
- Staff should be educated not to walk in and out of the ED rooms unnecessarily while patient handover is occurring.
- A separate waiting area should be created for family and for people waiting for treatment to decrease the amount of traffic inside the ED. However, this will be a long-term strategy requiring structural changes in the ED.
- The patient handover should be listened to before other activities are continued with.

- In-service training should be given in keeping noise levels down (especially keeping voices down), and being aware of noise levels.
- Noises should be minimised to improve patient handover. If noises distract emergency care practitioners or healthcare professionals they must ask people to reduce noise levels to enable them to hear the patient handover better.
- Monitor alarms should be silenced as soon as they go off.
- Healthcare professionals should immediately investigate the reason for an alarm going off and silence it before it causes a distraction.
- Signs imploring people to decrease noise levels should be displayed inside the ED and at the entrance. This too is a long-term strategy requiring structural changes.

5.3.3.2 Recommendations

The following recommendations were made relating to the sub-theme of environment and its categories and sub-categories:

- Through education and information visitors and non ED staff (e.g. cleaners, nurses from other wards, etc.) should be prevented from using the ED as a walk-through area.
- Alarm should be set according to a patient's individual and optimal parameters to prevent the monitor from alarming and causing unnecessary noise.
- Healthcare professionals should continuously assess patients and give immediate attention when monitor alarms go off, after which the alarms should be silenced so as to reduce noise levels.
- Awareness about noise levels and the influence of noise on the effectiveness of patient handover in the ED should be raised, also among support staff (cleaners).
- Asking questions that are not urgent during patient handover should be refrained from and postponed until after the patient handover is completed.
- One healthcare professional (nurse or medical doctor) should be delegated to listen attentively and participate in the patient handover to prevent information loss.

- Healthcare professionals should start with non-life-threatening patient treatment after the patient handover is completed.
- If treatment is required for a patient whose life is threatened, one healthcare professional, who is not involved in patient management, should be allocated to participate in the patient handover while others treat the patient.

5.3.4 Sub-theme 3: Handover

Handover was the third sub-theme identified (see Chapter 4, Section 4.2.4). In this section a concluding review of this sub-theme is presented and the strategies (Section 5.3.4.1) collaboratively identified to address handover, as well as the recommendations (Section 5.3.4.2) made, are mentioned.

Patient handovers are done on a daily basis in the ED and they start once emergency care practitioners enter the ED. Patient handovers in the ED are important for information to be transferred from the pre-hospital to the in-hospital environment. In all the cases observed, the patients brought in by the emergency care practitioners were handed over verbally to the healthcare professionals. In some instances (14 patient handovers), written communication in the form of a pre-hospital report was also observed. Under the sub-theme of handover, ten categories were identified, namely: language, inappropriate qualification, from emergency care practitioner to nurse, from emergency care practitioner to doctor if serious, unstructured handover, written handover, attentive listening by healthcare professionals, history differs, repetition of handover and opportunity to pose questions to emergency care practitioner / family (see Chapter 4, Sections 4.2.4.1 to 4.2.4.10).

Language was highlighted by participants after analysing the observation notes. They indicated that although the corporate language was English it was not always used during patient handovers. Emergency care practitioners and healthcare professionals sometimes used their preferred indigenous languages when doing patient handovers, with the result that not all personnel were involved in or understood the patient handover. This could lead to information loss. When the

patient handovers observed were done in the corporate language (English), both emergency care practitioners and healthcare professionals involved understood the patient handover.

Inappropriate qualification was the second category that was identified. It was observed that emergency care practitioners started some of the patient handovers with a less qualified (junior) healthcare professional and had to stop and start over again when a more qualified (senior) healthcare professional was available. This happened in particular when a patient's condition was more serious and warranted the care of a more qualified healthcare professional. When a more qualified healthcare professional arrived, the patient handover and the transfer of information had to be repeated, which could lead to information loss.

Patient handover between the emergency care practitioner and nurse was observed as the most regular way in which patient handovers occurred in the ED. This was mainly due to the fact that only patients triaged as green, yellow or orange category patients were observed, in other words, patients whose conditions were less serious and who could be received and treated by these nurses without the involvement of a doctor. The emergency care practitioner handing over a patient in a serious condition to the emergency doctor was another form of patient handover that occurred. In instances where the patient was triaged as an orange category patient, that is, someone who is more seriously ill or injured, the doctor would be called upon to be part of the patient handover from the beginning. Therefore, the patient handover would be handled by the most appropriately qualified healthcare professional from the start, and the continuity of patient care and the prevention of repetitions of patient handover/information transfer would be ensured.

All 20 patient handovers observed between the emergency care practitioner and the healthcare professionals were unstructured despite two emergency care practitioners indicating to the researcher after the patient handovers that they were aware of the different patient handover structures available. These 20 observed patient handovers were all done verbally, and it was clear that a verbal patient

handover was the preferred method among emergency care practitioners. Therefore, verbal handover was identified as a sub-category of unstructured patient handovers. Although a verbal patient handover is not the only way in which handover can be done, it is the most effective and most preferred method. The participants stated that a patient handover should always be done verbally as it gave the emergency care practitioner an opportunity to adequately describe all of the patient's identified problems and pre-hospital treatment to the healthcare professionals. Verbal patient handovers also provided the healthcare professionals with an opportunity to interact with (ask questions) and listen attentively to the emergency care practitioners.

The participants identified attentive listening by healthcare professionals as the next sub-category. Although it was evident that not all healthcare professionals listened attentively to the patient handovers, in the majority, 15 of observed patient handovers at least one healthcare professional listened to the patient handover. Attentive listening is very important for information transfer during patient handovers and if it is lacking it could lead to information being missed and lost for ever. The only source of information that remains once the emergency care professional has left the ED is the written record, and, therefore, it was identified as important.

It was indicated that a written record should always follow up a verbal patient handover. In the majority, 14 of the patient handovers observed the emergency care practitioners provided a written record to the healthcare professionals. However, in some cases (6 patient handovers) the written document was only received a while after the verbal patient handover had been completed. Written records are very important and should follow the verbal patient handover as they constitute the only proof of what transpired during the pre-hospital period. Furthermore, it is the only document the healthcare professionals can refer back to if they want to retrieve the verbal information handed over. Lastly the written document can also be referred back to if there are differences in the history provided by the patient to the emergency care professional, the nurse and the doctor. In 4 of the patient handovers it was observed that the patient history that the emergency care practitioners handed over differed from the history the patient or the family provided. This became evident

when the healthcare professionals (nurse and doctor) asked the patient questions after the patient handover and received more or different information than that which had been handed over.

Repetition of patient handover occurred in nine instances and it was found that this repetition led to information loss. The two main reasons for repeating patient handovers were, firstly the doctor was not present at the start of the patient handover, joined the patient handover late and expected the emergency care practitioner to start over again. Secondly, instead of listening to the patient handover, the healthcare professionals started treating the patient during the patient handover; consequently the emergency care practitioner had to either stop or wait and answer the questions of the healthcare professional about information that had already been given.

The patient handover process was observed to be a two-way street between the emergency care practitioner and the healthcare professional. The opportunity to ask the emergency care practitioner / family questions did present itself in six of the patient handovers observed, but this was not the daily practice in the ED. Healthcare professionals did ask the family questions when the emergency care practitioner had not provided sufficient information or when the information provided was unclear. Healthcare professionals also asked the emergency care practitioners questions during or after the patient handover when they needed more information or when they needed the emergency care practitioner to clarify uncertainties.

5.3.4.1 Strategies
The strategies related to handover that were identified during the creative hermeneutic data analysis session were:
- The shift leader (healthcare professional) should allocate the correct nurse (healthcare professional) to take the patient handover to ensure that the appropriately qualified healthcare professional is present at the patient handover.
- Healthcare professionals should listen attentively to the patient handover to prevent loss of information.

- If possible all healthcare professionals should pay attention and listen to the patient handover.
- Healthcare professionals should ask the family questions if information is unclear.
- Emergency care practitioners should follow a specific structure when doing patient handovers.
- All patient handovers should be done verbally and followed up with a written record.
- Patient handovers should be done in the corporate language (English).
- Emergency care practitioners and healthcare professionals should collaborate and reach consensus on which structured handover process to use in the ED.

5.3.4.2 Recommendations

The following recommendations relating to the sub-theme of handover and its categories and sub-categories were made:

- The corporate / prescribed language (English) should be used during all patient handovers.
- All patients triaged as green, yellow or orange category patients, in other words, patients whose conditions are less serious, should be handed over from the emergency care practitioner to the nurse.
- All patients triaged as red category patients, in other words, patients whose conditions are serious, should be handed over from the emergency care practitioner to the doctor.
- The use of a specific patient handover structure (for instance, MIST, IMIST, SAMPLE) is very important.
- Emergency care practitioners and healthcare professionals should reach consensus on the structure of patient handover to be used in the ED.
- All verbal patient handovers should always be followed up with a written record which should be provided immediately after the verbal patient handover.
- Awareness should be raised among emergency care practitioners and healthcare professionals about the importance of listening attentively to patient handovers.

- If the patient history provided by the emergency care practitioners differs from the information provided by the patient, the information should be confirmed / clarified by posing questions to the emergency care practitioners before they leave the ED.

- If a patient is not triaged as a red category patient and the patient's condition is, therefore, not serious, no multi-tasking or patient treatment should occur during the patient handover.

- The family should be included in the patient handover so as to give them the opportunity to ask questions and provide the healthcare professionals with additional information.

5.3.5 Sub-theme 4: Confidentiality

The final sub-theme identified was confidentiality (see Chapter 4, section 4.2.5). In this section a concluding review of this sub-theme is presented and the strategies (section 5.3.5.1) collaboratively identified to address confidentiality in practice as well as the recommendations (section 5.3.5.2) made are mentioned.

Participants identified maintaining confidentiality as an important factor during patient handover in the ED (see Chapter 4 Section 4.2.5). In accordance with the Patients' Rights Charter (Department of Health 2014) all patients have the right to privacy and confidentiality; therefore, all patient information should be treated as confidential. In the ED it is difficult to maintain patient confidentiality because of the layout of the area. For instance, in the five-bed area the beds are separated only by a curtain. Furthermore, because the environment is busy and noisy and people have to speak up to be heard it is difficult to maintain confidentiality. In all of the patient handovers observed in the ED the emergency care practitioners did try to maintain confidentiality by talking softly but still loud enough for healthcare professionals to hear.

5.3.5.1 Strategies

No specific strategies relating to confidentiality were identified by the participants.

5.3.5.2 Recommendations

The following recommendations were made relating to maintaining confidentiality during patient handovers:

- Patient handover should be done at the patient's bedside with the curtain closed and both emergency care practitioners and healthcare professionals standing on the inside to promote confidentiality and privacy.

- Both emergency care practitioners and healthcare professionals should be mindful not to discuss patient information in front of people not involved in the patient's care.

1.9 5.4   ADDITIONAL RECOMMENDATIONS

Based on the research findings the researcher made additional recommendations relating to patient handover practices. These recommendations relate to practice, education, management and future research.

5.4.1 Practice

- The findings of this study should be shared with all emergency care practitioners and healthcare professionals involved in patient handover practices in the relevant ED so as to raise awareness of current patient handover practices and the challenges identified. Once the emergency care practitioners and healthcare professionals are aware of the challenges they may be more likely to contribute to the improvement of the patient handover practices.

- Emergency care practitioners and healthcare professionals should be given the opportunity to reach consensus on the identified strategies to be implemented and/or to identify additional strategies to be implemented to enhance patient handover practices.

- The strategies identified by the emergency care practitioners and healthcare professionals in the ED to improve patient handover practices should be implemented collaboratively.
- Patient handover practices should be re-evaluated on a continuous basis and feedback on the findings should be given to emergency care practitioners and healthcare professionals.

5.4.2 Education

- Educators involved in the training and education of emergency care practitioners and healthcare professionals should focus on the importance of structured patient handover in the ED.
- Educators should evaluate emergency care practitioners' and healthcare professionals' competencies relating to patient handover.
- Increased focus should be placed on the importance of handover (communication) in patient outcomes.

5.4.3 Management

- Top and middle management should collaborate with emergency care practitioners and healthcare professionals in drawing up a policy relating to patient handover practices.
- Continuous monitoring and evaluation of the implementation of patient handover practices should be conducted and feedback should be given to all emergency care practitioners and healthcare professionals.

5.5 FUTURE RESEARCH

Based on the findings of the study, the following topics for future research were identified:

- Collaboratively compile a policy for EDs on patient handover.
- Evaluate the patient handover policy and implement it in EDs.
- Investigate the effect of patient handover practices on patient outcomes.

- Explore the experiences of emergency care practitioners and healthcare professionals regarding patient handovers in the ED.
- Explore the views of the patient/families relating to patient handover practices to move towards patient-centred handover practices.

5.6 LIMITATIONS

The study addressed questions relating to re the current patient handover practices between emergency care practitioners and healthcare professionals in a selected ED by means of observation and to collaboratively plan strategies to improve these patient handover practices. Nevertheless, owing to the nature of the study there were some limitations.

Due to the hectic environment in the ED, opportunities for observing patient handovers might have been missed owing to staff shortages. The researcher as an observer was not always accompanied by a second observer [professional nurse] who could assist with gathering data. Although they were invited, the ED doctors and emergency care practitioners were not involved in any of the observations (awareness period). The ED doctors were not involved in the data analysis or strategy planning to improve the current handover practices. This lack of involvement of the doctors, despite being invited, is a limitation as the behavioural challenges relating to the doctors was observed and identified in this study.

5.7 PERSONAL REFLECTION

To be honest, when I started with this study I was scared. The fear of doing research, which was unknown to me, was almost overwhelming. With the guidance and support of my supervisors I grew not only personally but also professionally and I became more acquainted with the research process.

My research showed that not much was known about current patient handover practices between emergency care practitioners and healthcare professionals in the

ED. Being an emergency nurse myself I know that patient handovers are part of our everyday activities, that they occur multiple times on a daily basis and that they are important for the continuity of patient care from the pre-hospital to the in-hospital environment. I also know that a patient handover differs from one patient to the next and from one emergency care practitioner to the other. Having been involved with the selected ED for some time I knew that the emergency care practitioners did not always provide a written record confirming a verbal patient handover process. Apart from that I knew little – I had a limited knowledge of research methods or practical experience in research.

As the study proceeded and after doing a lot of reading it became clear to me that the problems I had identified as the reason for the study were not only common in the specific ED or in South Africa, but that they also occurred in other EDs around the world. It became evident that not much research had been done specifically on patient handovers between emergency care practitioners and healthcare professionals in an ED in a South African context. Searching for and reading many scientific articles certainly made me an expert reader. Once the data collection process commenced, I really started to enjoy doing research. It was very satisfying to see that what I thought was going to happen was really happening, and much more besides. Seeing how the research questions were being answered was wonderful. Through using observation as a data collection method I have learned how to observe my practice in an unbiased manner. I now find myself using all my senses when I observe something. Going about my daily activities in the ED I also catch myself evaluating and observing patient handovers as they occur.

During the data analysis session I came to realise that different people interpreted patient handovers in the ED differently. Some of the sub-themes, categories and sub-categories identified I would never have thought of or would have addressed in another way. The inclusion of all the participants (both emergency care practitioners and healthcare professionals) in the data analysis process gave us the opportunity to learn a lot from one another. This collaborative analysis method raised awareness among participants about current patient handover practices and the strategies that

could be implemented to improve them. I believe that by letting participants plan the strategies together with me, the researcher, they are more likely to implement them. An adult learning principle we all know about is that adults do not like to be told what to do: they would rather participate and collaboratively decide what to do. This is the method that was followed in this study: the participants and the researcher collaborated in planning the strategies for implementation.

In some ways the findings of the study were not unexpected although there were a few surprises. As a researcher I definitely learned a lot about the current challenges of patient handovers in an ED. I have also become aware of my role in the current patient handover practice, and also of what is right and what is wrong. Through the implementation of the planned strategies I am sure that current patient handover practices will improve and that, in turn, patient care will improve.

In general I have gained a tremendous amount of new knowledge about the application of theory to practice. In addition, I have learned that proper planning prevents poor performance and that patience is virtue. Furthermore, I have learned to not just read, but to read to gain insight, to never accept things at face value, to always want to know more and to also want to know the how, the what and the why of everything I come into contact with.

The completion of this research project has instilled in me a great feeling of pride and of accomplishment. It makes me proud to realise that this study will be used by many other researchers who want to improve patient handover practices in an ED. Moreover, knowing that both emergency care practitioners and healthcare professionals have become aware of current patient handover practices and their challenges and that they have planned strategies for improvement collaboratively, I feel I have accomplished something. I hope they will implement the strategies and continue to use them. I know the seed has been planted.

5.8 CONCLUSION

This study was presented in five chapters. In Chapter 1 an orientation to the study was given. It focussed on the problem statement and provided background information in support of its formulation.

In Chapter 2 an in-depth literature review was presented. A definition of a patient handover, the different methods of patient handover and their value, and the handover environment were discussed. The literature on patient handover practices in other countries was reported on and was used to underpin the research done for this study.

Chapter 3 provided an overview of the research design and the methodology used to address the research questions of the study. The qualitative research design and the data collection method of unstructured participant observation used in this study were also discussed. The population, the sample used and the specific strategies implemented to enhance trustworthiness were explained and summarised. In addition, the data analysis method was described.

In Chapter 4 attention was given to the research findings. The creative hermeneutic data analysis method used was explained, and the sub-themes, categories and sub-categories extracted from the data were reported on. References were made to relevant existing literature that supported the discussions. The overarching theme identified was communication, whereas the other four sub-themes identified were disrespect, environment, handover and confidentiality.

Chapter 5 provided an overview of the conclusions, strategies and recommendations related to the identified theme and related sub-themes. The limitations of the study were noted and suggestions for future research opportunities were made. A personal reflection on the study by the researcher concluded this chapter.

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ANNEXURE A

ETHICAL APPROVAL

FACULTY OF HEALTH SCIENCES: UNIVERSITY OF PRETORIA

The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.
- FWA 00002567, Approved dd 22 May 2002 and Expires 20 Oct 2016.
- IRB 0000 2235 IORG0001762 Approved dd 22/04/2014 and Expires 22/04/2017.

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Health Sciences Research Ethics Committee

9/05/2016

Approval Certificate
New Application

Ethics Reference No.: 249/2015

Title: IMPROVING PATIENT HANDOVER PRACTICES FROM EMERGENCY CARE PRACTITIONERS TO HEALTHCARE PROFESSIONALS

Dear Mrs Santel de Lange

The **New Application** as supported by documents specified in your cover letter dated 30/03/2016 for your research received on the 6/05/2016, was approved by the Faculty of Health Sciences Research Ethics Committee on its quorate meeting of 9/05/2016.

Please note the following about your ethics approval:
- Ethics Approval is valid for 1 year
- Please remember to use your protocol number **(249/2015)** on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, or monitor the conduct of your research.

Ethics approval is subject to the following:
- The ethics approval is conditional on the receipt of 6 monthly written Progress Reports, and
- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

We wish you the best with your research.

Yours sincerely

Dr R Sommers; MBChB; MMed (Int); MPharMed.
Deputy Chairperson of the Faculty of Health Sciences Research Ethics Committee, University of Pretoria

The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 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).

☎ 012 356 3084   ✉ deepeka.behari@up.ac.za   🔗 http://www.healthethics-up.co.za
✉ Private Bag X323, Arcadia, 0007 - Tswelopele Building, Level 4-59, Gezina, Pretoria

ANNEXURE A2

THE HOSPITAL

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Permission to access Records / Files / Data base at the ████████████████

To: Hospital Manager
████████████████

From: The Investigator
████████████████
Mrs S de Lange

Re: **Permission to do research at** ████████████

Mrs. S de Lange is a researcher working at the ████████████████████████████ I am requesting permission to conduct a study on the ████████████████ grounds.

The request is lodged with you in terms of the requirements of the Promotion of Access to Information Act. No. 2 of 2000.

The title of the study is:

Improving patient handover practices from emergency care practitioners to healthcare professionals

The researchers request access to the following information:

Observation of the handover practices occurring between emergency care practitioners and healthcare professionals in the emergency department.

We intend to publish the findings of the study in a professional journal and/ or at professional meeting like symposia, congresses, or other meetings of such a nature.

We intend to protect the personal identity of the participants (emergency care practitioners and healthcare professionals). Patients will not be observed or involved in the research study.

We undertake not to proceed with the study until we have received approval from the Faculty of Health Sciences Research Ethics Committee, University of Pretoria.

Yours sincerely

Permission to do the research study at this hospital and to access the information as requested, is hereby approved.

Hospital Manager

████████████████

Signature of the Hospital Manager

████████████████

ANNEXURE A3

PRE-HOSPITAL GROUP 1

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

RESEARCH OPERATIONS COMMITTEE FINAL APPROVAL OF RESEARCH

Approval number: UNIV-2015-0044

Ms Santel de Lange

E mail: Santel.DeLange@Mediclinic.co.za

Dear Ms De Lange

RE: IMPROVING PATIENT HANDOVER PRACTICES FROM EMERGENCY CARE PRACTITIONERS TO HEALTHCARE PROFESSIONALS

The above-mentioned research was reviewed by the ██████████████████████████ delegated members and it is with pleasure that we inform you that your application to conduct this research at ██████████████████████ has been approved, subject to the following:

i) Research may now commence with this FINAL APPROVAL from the ███████████ Research Operations Committee.

ii) All information regarding ██████ will be treated as legally privileged and confidential.

iii) ████████ name will not be mentioned without written consent from the ████████ Research Operations Committee.

iv) All legal requirements with regards to participants' rights and confidentiality will be complied with.

v) ████████ must be furnished with a STATUS REPORT on the progress of the study at least annually on 30th September irrespective of the date of approval from the ████████ Research Operations Committee as well as a FINAL REPORT with reference to intention to publish and probable journals for publication, on completion of the study.

vi) A copy of the research report will be provided to the ████████ Research Operations Committee once it is finally approved by the relevant primary party or tertiary institution, or once complete or if discontinued for any reason whatsoever prior to the expected completion date.

Directors:

vii) ▉▉▉ has the right to implement any recommendations from the research.

viii) ▉▉▉ reserves the right to withdraw the approval for research at any time during the process, should the research prove to be detrimental to the subjects / ▉▉▉ or should the researcher not comply with the conditions of approval.

ix) APPROVAL IS VALID FOR A PERIOD OF 36 MONTHS FROM DATE OF THIS LETTER OR COMPLETION OR DISCONTINUATION OF THE STUDY, WHICHEVER IS THE FIRST.

We wish you success in your research.

Yours faithfully

1/7/2015

Full member ▉▉▉ Research Operations Committee & Medical Practitioner evaluating research applications as per Management and Governance Policy

Chairperson ▉▉▉ Research Operations Committee

Date: 15/7/2015

ANNEXURE A4

PRE-HOSPITAL GROUP 2

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

10 July 2015

Santel de Lange
Department of Nursing Science
University of Pretoria

Dear Ms de Lange,

RE: **PROJECT 2015/05**
PROJECT TITLE: Improving patient handover practices from emergency care practitioners to
                     healthcare professionals

The above research protocol has been reviewed by the ████ Research Committee and I am pleased to
inform you that your request has been approved. Access is hereby granted to the data required as stipulated
in your protocol.

Should your methodology change or any concerns arise during the data collection period, it is your
responsibility to inform the ████ Research Committee in due course. You are also required to forward the
completed project to ████.

I look forward to viewing the results of your study. I am positive that the science that you will generate will
be of benefit to the profession.

Kind Regards,

ANNEXURE B

PARTICIPATION LEAFLET AND INFORMED CONSENT

Participation leaflet and informed consent

Title of the study:

Improving patient handover practices from emergency care practitioners and healthcare professionals

Dear Participant,

You are invited to participate in a research project. This information leaflet contains information that will help you understand your role in the study. If there is any need for further clarification, please feel free to contact the researcher at any time. Please note that no remuneration will be provided for participation in this research study.

1) The purpose and objectives of the study

The aim of the study is explore current patient handover practices between emergency care practitioners and healthcare professionals in an emergency department in Gauteng and identify strategies to improve these handover practices.

2) Explanation of procedures to be followed

You are invited to participate in an observational study on the process of patient handover in your ward. The emergency department where you work was selected to participate in the research study. The research study will be conducted over a period of three months, which is planned for 2015. The observation tool that will be used has been developed to help the observers involved in patient handover to objectively observe patient handover practices. The researchers and the emergency care practitioners and/or healthcare professionals will participate in observing patient handover practices using the attached observation tool. Once all the data has been collected, the researchers will analyse the data and ask you to participate in this process, which will provide you with an opportunity to have insight and reflect on the current patient handover practices. The analysed data will then be used to make recommendations for changing current patient handover practices, which can be implemented in your department.

3) Risk and discomfort involved

As a participant, there are no known risks in this study; however you may feel uncomfortable at times during the observation sessions. The researcher and emergency care practitioner and/or healthcare professional from the selected emergency department will observe activities for the duration of the patient handover between the emergency care practitioner and healthcare professional in the selected emergency department.

4) Benefits of the study

Using the observation tool, the observers will systematically record all aspects of patient handover practices in the emergency department. Benefits include a potential improvement in the healthcare delivery to the patients nursed in your department once the recommendations have been implemented. Patient handover practices may be more systematic and standardised in future, thereby ensuring that the right information is shared from emergency care practitioners to healthcare professional during patient handover.

5) Voluntary participation in and withdrawal from the study

Participation occurs on a voluntary basis. If you as a participant want to withdraw from the study at any time during the research study, you may withdraw without submitting a reason. Feel free to contact the researcher if it may happen that you would want to withdraw. No person will be identified during the data collection process.

6) Ethical approval

The Faculty of Health Sciences' Research Ethics Committee at the University of Pretoria, as well the hospital involved. Please feel free to contact Mrs Deepika Behari if you need any clarification pertaining to ethical approval inquiries.

Departmental Administrator - Student Research Ethics Committee

Level 2, Room 2-33

31 Bophelo Road, Gezina

Private Bag X323, Arcadia, 0007

☎ 012 3541677 📠 086 6516047

✉ deepeka.behari@up.ac.za
✉

7) Additional information

If you have any questions about your participation in the research process, you should contact the researchers:

Mrs Santel de Lange

Cell phone: 082 523 7665

Email address: delangesantel@gmail.com

8) Confidentiality

Your input into this research will be kept confidential, as you will not need to indicate your name during the observation. No names will be mentioned in the observation tool of the practitioners observed either. Results will be published and presented in such a manner that you as a participant will remain anonymous. Data collected on the day will be kept in lockup with only the researchers having access to it.

9)   Consent to participate in this study

Your participation in this research is subject to reading and accepting the above information and signing the informed consent document below.

INFORMED CONSENT

I confirm that the person asking my consent to take part in this study has told me about nature, process, risks, discomforts and benefits of the study. I have also received, read and understood the above written information (Information Leaflet and Informed Consent) regarding the study. I am aware that the results of the study, including personal details, will be anonymously processed into research reports. I am participating willingly. I have had time to ask questions and have no objection to participate in the study. I understand that there is no penalty should I wish to discontinue with the study and my withdrawal will not affect me in any way. I hereby volunteer to take part in this research

Participant's name   _____(Please print)

Participant's signature   _____   Date_____

Investigator's name   _____(Please print)

Investigator's signature   _____   Date_____

Witness's name   _____(Please print)

Witnesses' signature   _____   Date_____

ANNEXURE B1

PHOTOS

Title

Improving patient handover practices from emergency care practitioners to healthcare professionals

Re: Taking of photos during the data analysis (interactive workshop)

I…………………………..(name in PRINT) hereby give permission that photos may be taken during the data analysis session on the ……………….. I give permission that the photos may be used by the researchers to show evidence of the data analysis during presentations of the research findings.

Participant's name: ……... (Please print)

Participant's signature: ....…………………	Date...........................

Investigator's name ....………………………...(Please print)

Investigator's signature ....…………………	Date…......................

Witness's Name ....……………................	.(Please print)

Witness's signature ....…………………...	Date…......................

ANNEXURE C

OBSERVATION TOOL

Patient handover in the ED: Observation tool

Date: **Time:**

Observer 1   **Observer 2**

Name in print:_____   **Name in print:**_____

Signature:_____   **Signature:**_____

Observer Prompts	Observation Notes	Questions Arising
Patient handover participants • *Who was involved? (Nurses, doctors, emergency care practitioners)*		
Type of patient handover done • *Written, verbal or combined?*		

<u>Patient handover place</u> • *Where is the patient handover taking place? (Bedside, nurses' station etc.)*		
<u>Patient handover process</u> • *Was there any interruptions observed during the process? If so, describe.*		

Observer Prompts	Observation Notes	Questions Arising
• *Was a specific structure followed? (e.g. IMIST AMBO, MIST)*		

Additional Notes (general impression about the patient handover e.g. non-verbal communication; attitudes; environment)

COMPLETED OBSERVATION TOOL

Patient handover in the ED: Observation tool

Date: 22 October 2015   Time: 07 30

Observer 1

Name in print:

Signature:

Observer 2

Name in print:

Signature:

Observer Prompts	Observation Notes	Questions Arising
Patient handover participants • Who was involved? (Nurses, doctors, emergency care practitioners)	RN x2 ENA x1 EN x2 SDRN x1 RFN x1 CCA x1 Dr x1 (3) (3) Dringe trage category patient	

| Type of patient handover done
• Written, verbal or combined? | ③ ③ | Verbal handover followed by a written record given after the verbal handover.
en to EN and dr. | added why curtains drawn for privacy, as resus is at the bottom of the unit. Patient is... |
| Patient handover place
• Where is the patient handover taking place? (Bedside, nurses' station etc.) | ④ | At patient's bed side, in resus room. No other patients in resus. EN and dr standing foot end at the bed Drs on the left side with ENA and EN next to her, EN at the top. Dr and other EN ⑤ (e) head side. Both EN and PEN left when handover started.
Curtains drawn with everyone in the unit.
Patient slightly confused and at a onset she did not answer her questions. | |

Patient handover process
- *Was there any interruptions observed during the process? If so, describe.*

Start busy with patient treatment, but not interfering no noise. Quiet environment. I did not patient speaking while EN told CCA to start with handover and CCA had to wait, CCA was busy with handover when or interupted to confirm HGT / which she read instantly CCA then continued.

Observer Prompts	Observation Notes	Questions Arising
• Was a specific structure followed? (e.g. IMIST AMBO, MIST)	③ Pt Name, age, where she lives, current meds and intake time. Called for ambulance on arrival at scene what was found. Vital Signs BP, HR, HGT, sats and further treatment. Very detailed handover observed from nurse.	

CPR — Emergency care (continued)

Additional Notes (general impression about the patient handover e.g. non-verbal communication; attitudes; environment)

EMS walked into ED, and cut Right to the duty station and walked straight to the 5 bed area. Then placed the patient to rather put the patient in area and received them in the bed. Wait for resus where the bed was called. The patient lay by one of the beds. EMS arrived and asked EMS why they went to put the patient in resus. CCA explained due to drugs given and patient's eye and injuries. Nursing patient aid and slightly confused. Curtain at end of the bed was drawn for privacy with all staff on the inside. Patient was then transferred over to ED bed on stretcher. EN arrived after EN asked EMS to call the Dr. EN then asked CCA to assist with the handover, EN x 2, EMS and other Dr continued to remove patient then scoop, removed tape, monitor and connected patient to monitor (connected by. Meanwhile Dr asked patient how she is and what happened initial CCA could start with the handover.

Patient given confused and couldn't unsure the Dr also talking softly and (actually). Then deferred with handover to Nurse, OCA, nurse by says, current problem and made time. Called for ambulance, on arrival of unit went happened and level was found. Vital signs: BP, HR, HGT. D intubated confirming the HGT. Then CCA continued with treatment given on scene. We waited for labs and as give it

and further treatment given in centre. EN was listening and writing at the same time.
Staff was busy with patient treatment but not talking or interrupting handover. Environment
relaxed. No other patients in room. Friendly environment. Used handover between EN
healthcare professionals and EMS. Written record was given immediately after verbal
handover. Handover of patient beside. EN and CCA standing at feet of bed. Verbal
audibly. EN x1 at head of bed, then next to EN, other EN and EN on the other side
of bed and CCA at opposite side.

CCA did ask if there was anything the staff needed before leaving

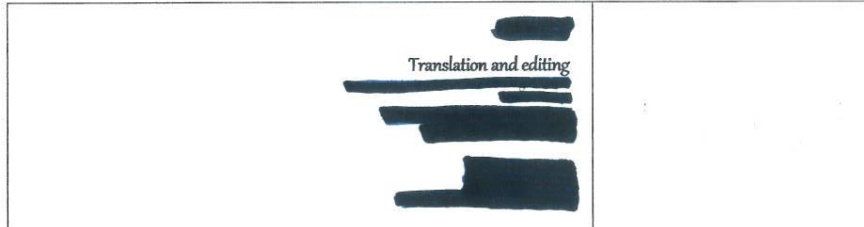Medical history : Hypertension , hypercholesterolemia

EXAMPLE OF DATA ANALYSIS
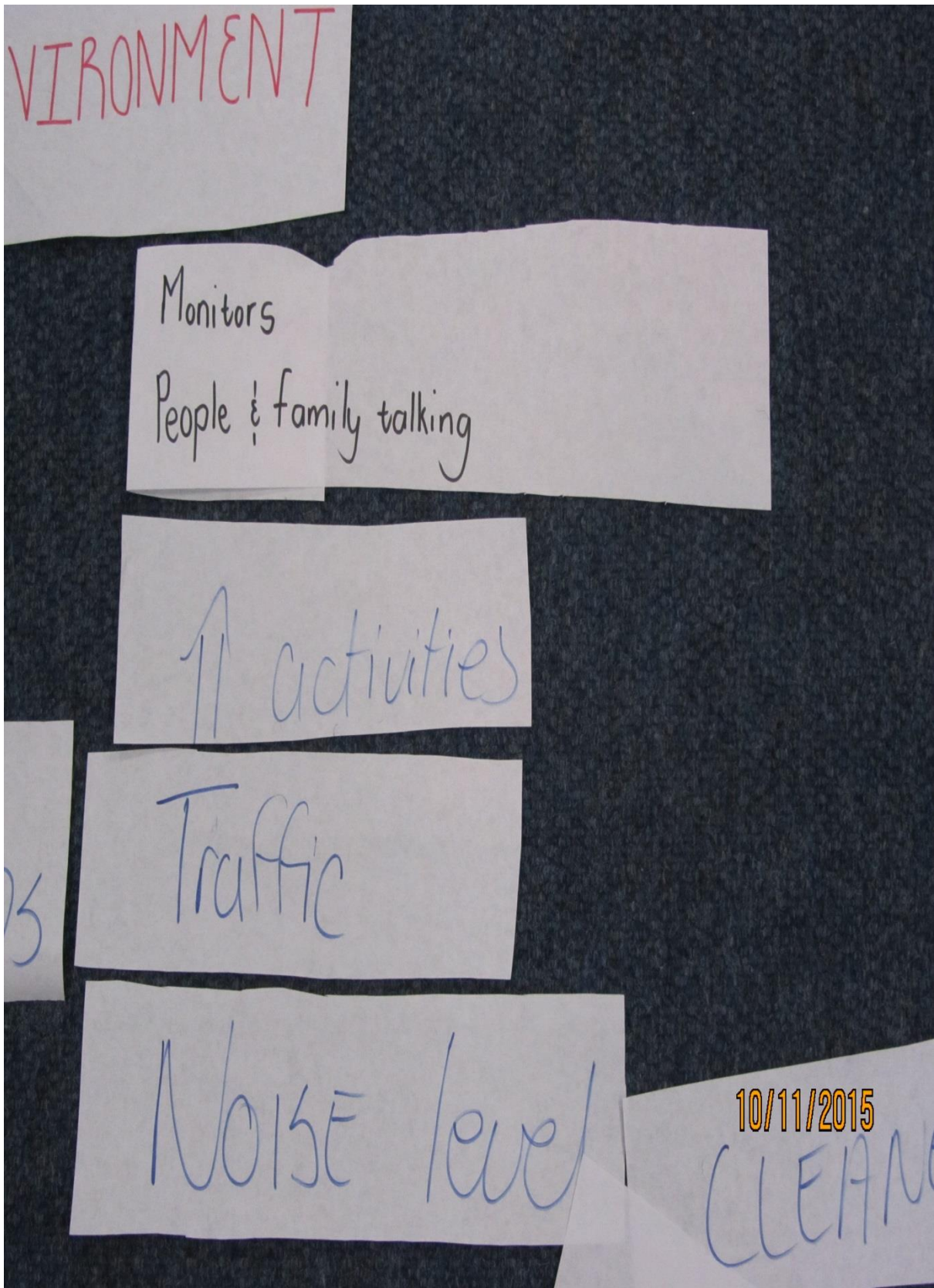
ANNEXURE E

LETTER FROM THE EDITOR

Translation and editing

15 April 2016

DECLARATION OF PROFESSIONAL EDIT

Improving patient handover practices from emergency care practitioners to health care professionals

by **Ms Santel de Lange** (student number 29656576)

I declare that I have edited this master's dissertation. My involvement was restricted to language usage, spelling, consistency, completeness, referencing style and basic formatting. The editing was done using track changes and comment boxes; therefore, responsibility for the final document rests with the student.

Sincerely