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The Ethics of declining or delaying patient transport in a non-emergency pre-hospital environment

by

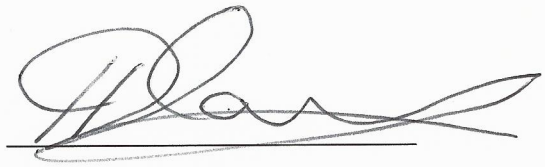
David Saunders

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand Johannesburg in partial fulfilment of the requirements for the degree of Master of Science in Bioethics and Health Law.

Johannesburg, 2015

DECLARATION

I, David Saunders declare that this research report is my own work. It is being submitted for the Degree of Master of Science (Med) in Bioethics and Health Law at the University of the Witwatersrand, Johannesburg. This report has not been submitted before any other University for a degree or examination.



David Saunders

28 January 2016

Date

DEDICATION

This research report is dedicated to my wife Karin who has been patient and supported me throughout the weekends and long nights whilst I was researching and writing this report.

ACKNOWLEDGEMENTS

I would like to acknowledge my supervisors Dr. Chris Wareham and Dr. Anthony Egan who guided me through the academic writing process. Their contribution was immensely helpful.

Thank you.

ABSTRACT

Emergency medical services (EMS) face many challenges in South Africa. These include challenges such as working in a high risk environment and negotiating through high volumes of traffic to reach patients and provide them with pre-hospital emergency care. Almost every day the ambulance practitioners are faced with complex situations that require making clinical and ethical decisions that could save a life. Responding to a medical emergency is time critical and involves getting to the patient, treating the patient and transporting the patient to a hospital within the golden hour. Often the ambulance personnel discover when they arrive at the scene that the patient may not be in an acute life threatening condition and the patient is not a medical emergency. I will argue that the process of triaging patients on scene from emergency to non-emergency will alleviate the perceived burden on the emergency medical services in the public sector.

The report primarily investigates the ethical and legal implications when an ambulance practitioner declines or delays patient transportation on the grounds that the patient is a non-emergency. The report commences with an introduction and a brief history of the ambulance services in South Africa and the pre-hospital emergency medical services, more commonly referred to as EMS. The report assesses literature on the ethics of declining and delaying patient transportation and discusses two theories in ethics namely utilitarianism and distributive justice and evaluates their application to the ambulance practitioner.

Sources of literature will include published books, articles and academic papers published online, listed at the University of Witwatersrand Library, Journals, databases and South African legislation related to the research subject and question. The report also identifies the law pertaining to the rights of patients and ambulance practitioners in terms of the Constitution Section 27. I will conclude with recommendations for a framework that could conceivably be realised by the ambulance practitioners to decline or delay patient transportation in a non-emergency pre-hospital environment in the public emergency medical services.

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CHAPTER 1: INTRODUCTION

"Significant delays are being experienced by the public ambulances services only 33% of priority 1 emergency calls are being responded to within the 15 minute response time allocated to medical emergencies" (Bloom, 2012).

All South African citizens have a constitutional right to the access and delivery of prompt and adequate healthcare within South Africa, including emergency medical treatment. However when ambulances crews later found when arriving at the callers location that the patient did not represent as a medical emergency. Newton et.al, (2015) cited "Studies conducted in developed countries suggest that widespread inappropriate use of EMS systems has been evident since the 1970s and that up to 52% of all requests for an EMS response are later found to be inappropriate". The purpose of this report is to investigate and evaluate if it is ethical for an ambulance practitioner to decline or to delay transportation because a patient is a non-emergency and to attend to true medical emergencies instead.

I will argue that, when the emergency medical services are under resourced, and thus the ambulance cannot attend all emergency alerts communicated by the call centre, that triaging non-emergency patients (those not in an acute life threatening situation) is permissible based on certain criteria. This will alleviate the perceived burden on the emergency medical services in the public sector. I will further argue that under the Constitution section 27 (3) the term "emergency medical treatment" is too broad in its definition and does not specifically refer to an emergency medical service (EMS) when attending to a patient who is classified as a non-emergency.

Chapter 1 introduces the problem and outlines how the emergency medical services and the ambulance functions in South Africa. Chapter 2 discusses the appropriate literature related to the ambulance service in South Africa and applies the ethical principles of utilitarianism and distributive justice to the central question whether it is ethical to decline or delay transportation of a non-emergency patient. The literature review will also discuss the concept and principle of triage, as triage is central to the research question addressed by this report. Chapter 3 appraises the Constitution Section 27(3) and defines what a medical emergency is. In this chapter, I argue that the clause "no one may be refused emergency medical treatment" conflicts with the decline or delay in patient transportation when the patient is a non-emergency.

In Chapter 4, I discuss the terminology used when an ambulance practitioner declines or delay's patient transportation, which is: "emergency medical services initiated refusal of transportation (EMS-IROT)" (Knapp et.al, 2009). In chapter 4, I also propose a set of two recommendations. The first set of recommendations suggest changes that need to be adopted within the EMS call centre. The second set of recommendations are for the ambulance practitioner. It should be noted that the call centre and the ambulance are integrally connected and therefore it is important to make the suggested changes in both these operational environments which will then facilitate the ambulance practitioner's ability to decline or delay transportation of a patient that is a non-emergency.

1.1 Background and Purpose of the Research

There is an ever increasing demand placed on the public emergency medical services (EMS) to respond to medical emergencies (Eastwood et.al, 2015). In South Africa the public EMS such as the City of Johannesburg Emergency Medical Services (COJEMS) received up to 491'000 calls per year.

This places a huge burden on the EMS to respond to every call, many of which may not be a medical emergency. The Gauteng Department of Health 2010 reported that 23% of patients transported were classified as being green code, in a stable and non-life threatening condition. Newton et.al (2015) reported in their research on the appropriateness of EMS responses in the eThikwini district of KwaZulu-Natal, South Africa that "When comparing resource allocation according to patient interventions, >58% of cases attended required no intervention or a means of transport only and <36% required basic life support (BLS) intervention". This research report considers the impact that a non-emergency call-out has on the emergency medical services. This research report also assesses the ethical and legal implications for ambulance practitioners to decline or delay patient transport once they have established that the patient is stable and is not classified as a medical emergency.

This problem is not exclusive to South Africa, other countries such as Australia (Lowthian, et.al, 2011), England (Booker, et.al. 2014) and the United States of America (Vecellio, et.al, 2012) also experience similar problems. Vecellio et.al. (2012) stated in their research on secondary triage: "Ambulance services around the world are facing increasing demand for their services coupled with funding constraints. It has been estimated that unnecessary emergency ambulance dispatch occurs in 11% to 52% of all emergency calls". Eastwood et.al. (2015) claimed that "a portion of the ambulance workload are patients categorized as low priority by primary telephone triage who have no or minimal physiological derangement, but still require an ambulance". This utilization of emergency medical resources is inefficient and may delay the provision of emergency medical care in cases where it is necessary".

In this section I outline how the emergency medical services in South Africa are structured to illustrate what allows an ambulance service to decline or delay patient transport in a non-emergency. There are two EMS sectors, the public and the private sectors. The public emergency medical service have a service in each province and are managed independently by their respective provincial health department. The private EMS sector operates ambulance companies that fulfil an important role that has developed over the years with increasing patient demand[1]. Generally, the private companies' involvement in the public sector is limited to patients who can afford to pay for the service. Private ambulances will, however, respond to medical emergencies, despite the patient not belonging to a medical insurance scheme. The onus is then on the private ambulance service to recover the cost of the treatment and transportation from the patient.

Private ambulance costs may be unaffordable to persons who are not on a medical insurance scheme and or who cannot afford to access private healthcare. According to the Council for Medical Schemes annual report of 2013, there are an estimated 8'762'000 beneficiaries of medical aid schemes. Thus 44 million (83%) of South Africans do not have private healthcare insurance and may not be able to pay for a private ambulance. Additionally these patient would most likely be reliant on the public health system for their emergency care and transportation. It is therefore left to the publicly-funded emergency medical services to respond to the majority of pre-hospital medical emergencies. This places a potentially huge burden on the EMS if they are under resourced.

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[1]Source: South Africa.info, 2014. [Online] Available at: http://www.southafrica.info/services/health/. [Accessed 26th March 2014].

An example of a publicly funded emergency service is the City of Johannesburg Emergency Services (COJEMS) which receives a high volume of daily calls (Dhlamini, 2014), estimated at a call per minute[2]. Many of these calls are from vulnerable groups. Vulnerable groups are defined by the European Quality Assurance in Vocational Education and Training as: "groups that experience a higher risk of poverty and social exclusion than the general population. Vulnerable groups may be ethnic minorities, migrants, disabled people, the homeless, those struggling with substance abuse, isolated elderly people or children. Vulnerable groups often face difficulties that can lead to further social exclusion, such as low levels of education and unemployment or underemployment"[3] The ambulance service is obligated to respond to every emergency call received by vulnerable groups. High call volumes may lead to COJEMS becoming over-burdened and incapable of providing a prompt and adequate medical service. Current challenges that face public ambulance services in South Africa are:

- The burden of acute medical emergencies and patients requiring treatment by ambulance personnel being overwhelming (Gottschalk, 2004)
- Distances ambulances have to travel to patients and finding their location affects response times (Toubkin, 2014 and Dhlamini, 2014)
- Location of public hospitals and deciding which hospital is the most appropriate hospital to take the patient to affects response times and hampers the quality of care (Toubkin, 2014).
- Ambulance practitioners experience uncertainty when dealing with non-emergency cases (Voorendyk, 2013).

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[2] Source: City of Johannesburg Emergency Medical Services, 2014. [MBA Thesis], Dhlamini J.A. Assistant Director.
[3] Source: European Quality Assurance in Vocational Education and Training, Vulnerable group, [Definition], [Online] Available at: http://www.eqavet.eu/qa/gns/glossary/v/vulnerable-group.aspx

- Dealing with cases that are non-emergencies in a pre-hospital environment has been identified as causing additional on-the-job stress for ambulance practitioners (Green, 1999).
- Shortages of EMS staff and ambulances impact on the emergency medical services' ability to respond to emergency calls in the allocated time frame of 15 minutes (Gauteng Department of Health Annual Report, 2012/2013).
- Incorrect and incomplete information is captured by the EMS call receiver which negatively impacts on the ambulance to respond to the emergency in an appropriate time (Dhlamini, 2014).
- EMS are required to respond to medical cases that are later discovered not to be emergencies, resulting in high levels of inappropriate responses (Newton, et.al, 2015).

The Gauteng Department of Health (GDOH) recognise that there is overuse of the EMS in the province. The GDOH annual reports 2010 / 2011 indicated that 23% (Appendix A) of patients transported to a hospital were green code, which is classified as a patient who is considered to be a stable, walking wounded or ill patient compared with a red code patient that are stretcher-bound and physiologically unstable (Gottschalk, 2004).

A green code is classified in the pre-hospital environment as a priority 3 or non-emergency patient (Gottschalk, 2004). One of the key GDOH performance plan goals to address the high use of the EMS by non-emergency patients is to "improve awareness of appropriate use of Gauteng Emergency Medical Services"[4], which

[4] Source: Gauteng Department of Health: Emergency Medical Services, 2014. [Online] Available at: http://www.health.gpg.gov.za/Pages/Emergency-Medical-Services.aspx. [Accessed 19th June 2014]

essentially recognises that the public may be abusing the service and do not understand when an ambulance should be called.

It is necessary to understand how the public EMS operates before explaining the problems it faces. First, a patient contacts a call centre with a medical emergency. The call receiver accepts the call and then hands it over to a dispatcher who allocates the closest and available ambulance to respond to the patient. If all the ambulances have been dispatched or are on a call, the call is put in the queue until one becomes available

The call is prioritized according to one of the following classifications: Medical, Maternity, Assault, Motor Vehicle Accident and Pedestrian Vehicle Accident. At this stage it is probable that the caller requires an ambulance as they are experiencing a medical emergency. The ambulance is dispatched and arrives on scene with only basic information about the patient's type of injury or medical condition. Although it is the responsibility of the call receiver to acquire as much information from the caller as possible, many callers are phoning on behalf of the patient and do not have sufficient information on the patient's medical condition to provide to the EMS call centre (Dhlamini, 2014). In most cases the type of medical emergencies and its severity are identified when the ambulance reaches the patient. The ambulance crew will assess the patient and prioritize them according to their medical emergency.

In the pre-hospital environment the priority system is widely used to categorize patients. Priority 1, the patient is physiologically unstable, is stretcher bound and requires immediate medical attention; priority 2, the patient is physiologically stable, and stretcher bound; priority 3 the patient is stable and walking, priority 4; the patient is dead (Gottschalk, 2004). The ambulance practitioner will stabilize the patient and transport them to the nearest hospital for further medical treatment and care.

The ambulance practitioner cannot refuse treatment and transportation and all patients, even priority 3, are transported. This scenario could have two implications. Firstly, the ambulance is now not available to attend to a priority 1 emergency should one arise and secondly, the amount of non-emergency patients being transported could potentially over-burden the emergency medical service and the emergency departments at public hospitals.

1.2 Rationale and reason for the study

This study was motivated by the relatively high number of priority 3, i.e. non-emergency, patients who are being transported by the City of Johannesburg emergency medical services (COJEMS), and the associated factors (listed below) that may, consequently, hinder an ambulance practitioner's ability to make critical life-saving decisions:

- Mild injuries and illnesses are cluttering the system, draining resources for more serious cases (MacFarlane et.al, 2004).
- The increase in case load and the high volume of calls attended to by EMS personnel in densely populated areas such as Johannesburg could be contributing towards heightened emotional stress (Stassen et.al, 2013).
- Call centres may be overwhelmed with calls and unable to answer every medical emergency on time. Ambulance response times may decline resulting in patients not receiving prompt treatment.
- According to the GDOH annual report 2013, public ambulances failed to meet their target of reaching 70% of priority 1 emergencies within 15 minutes. The actual achievement was 52%. They cited "Shortages of ambulances and staff continue to impact negatively on the achievement of the target". (Gauteng Provincial Government Health, Annual Report, 2012/2013. Pg. 74).

The findings of the study will contribute to the existing research in the field of pre-hospital emergency ethics and assist ambulance personnel in understanding the implications of their decisions when choosing to deal with patients that are not a medical emergency in a pre-hospital environment.

1.3 Research question

This research paper aims to answer the following question:

When, if ever, is it ethically acceptable for an ambulance practitioner to decline or delay patient transport when the patient is a non-emergency?

The research report focuses on two components of the Ambulance Service; the call centre and, more importantly, the ambulance practitioner to which the research question is specifically directed.

1.4 Research statement

Pre-Hospital emergency medicine, like any other clinical discipline, is guided by the ethical principles of Autonomy, Non-Maleficence, Beneficence and Justice. These four principles are recognised in the Constitution of South Africa (Dhai & McQuoid-Mason, 2011, p 14).

I will argue that in circumstances where the call dispatcher has triaged[5] the calls and the ambulance arrives at the patient, the ambulance practitioner could decline or delay patient transportation based on it being a non-emergency, thereby allowing ambulance's to be available to respond to medical emergencies.

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[5] Definition of Triage: (In medical use) the assignment of degrees of urgency to wounds or illnesses to decide the order of treatment of a large number of patients or casualties. Source: Oxford Dictionaries web link, [Online] Available at: http://www.oxforddictionaries.com/definition/english/triage. [Accessed 02 April 2014].

1.5 Objectives of the research report

My objectives are to conduct a normative study testing the research question against patient rights, ethical theories of utilitarianism (maximising public health utility) and distributive justice (fair and equitable distribution based on justified norms in a social structure). I will assess the research question in terms of current legislation and then critically examine the existing guidelines for emergency medical services and evaluate these guidelines in context of the research question.

In conclusion, I will establish a framework for ambulance practitioner to decline or delay non-emergent patients and set out a guide which will enable emergency medical services to make ethical decisions in a pre-hospital "non-emergent" situations.

1.6 Research methodology

This is a normative research paper which examines the ethico-legal implications for the ambulance practitioner to decline or delay patient transport when a patient is assessed by an ambulance practitioner and is classified as a non-emergency. The research is underpinned by library research and peer reviewed studies and reports on emergency medicine, ethics and pre-hospital emergency medical care relating to EMS.

Reports published by Governmental agencies, Journals and online through the University of Witwatersrand Library were systematically collected, read and referenced.

1.7 The history of Ambulance services in South Africa

The earliest record of an ambulance service being utilized was by the Spanish in 1487 (Skandalakis, et al.,2006). At this time the ambulance system was fairly rudimentary, it consisted of 'ambulancias', a horse and cart which were manned by volunteers who would traverse the battlefield to collect the wounded soldiers after a battle had ceased. This resulted in many of the injured soldiers dying in the field before they could be treated by the army physicians as the process was so slow. Skandalakis, et al., (2006) commends Dominique Jean Larrey (1766–1842) who was described as the father of modern military medicine. Larrey developed an effective method to evacuate wounded soldiers from the battlefield during the French Revolutionary wars (1792), (Nestor, 2003). Larrey was particularly disturbed by the general's lack of concern for the injured; they made little attempt to assist them. This concerned Larrey terribly and "for a man whose life was driven by compassion and morality, the unjustified death of even one soldier who could have been saved was unacceptable" something had to be done, hence his invention of Larrey's ambulance (Skandalakis et al. 2006).

According to Skandalakis, et al., (2006) the word ambulance was defined by Larrey as a moving hospital which was supposed to follow "one league" behind the army and was intended to treat the wounded expediently. However, due to the large number of casualties, this system failed and Larrey's ambulances often arrived between one and three days after the battle had ceased. Thus many injured soldiers died from their injuries that otherwise could have been treated if the 'ambulancias' had arrived earlier. Larrey implemented a new system, which involved collecting the wounded soldiers from the battlefield during the fighting which he named "ambulances volantes" meaning flying ambulance (Nestor, 2003). Not only was Larrey credited for the establishment of the ambulance, he also developed the system of triage.

At the time triage was a method of grading injuries, from those that were the worst wounded and needed immediate attention to the least wounded whose treatment could be delayed. This rule was developed regardless of military rank (Gottschalk, 2004). Due to Larrey's moral character and respect for humanity he also afforded equal rights to the wounded in the opposing army and he would ensure that even the fallen enemy soldier was treated by the flying ambulance.

As society advanced so did the ambulance services, and the evacuation procedure of war casualties from the battlefield. Throughout World War I and World War II, the role of the ambulance and the medic was elevated. Ambulances were motorized, traction splints were used along with the ability to administer basic first aid. Medics were now empowered and trained not only to collect the wounded from the battlefield but also to treat the injured and in many cases stabilize the wounded soldier before they were transported.

In 1950 the helicopter and mobile field hospital were introduced in the Korean War as illustrated in the classic USA television series "M.A.S.H" (mobile army surgical hospital). It was here that the importance of the helicopter became apparent in rapid evacuation and transport from the battlefield to a MASH (Kotze,1990). With the Vietnam War, the paramedic was introduced, a skilled and trained medic that could treat wounded soldiers on the battlefield, and stabilize and process the patient for rapid evacuation. These medics were able to perform medical interventions and administer pain medications such as morphine which later became part of USA paramedic's standard scope of practice.

South Africa followed suit in the 1960's with the concept of the operations medic who played a vital role in the South African military forces during the Angolan border war (1966 - 1989)[6] .

Towards the end of the 1970's, the Health Act No.63 of 1977 s16(b) was implemented which placed the ambulance services under the responsibility of the provincial health departments, but it was only ratified in 1981 (Dalbock, 1996). Henceforth, it was the responsibility of each provincial health department to establish, finance and operate the ambulance services. Towards the mid 1980's the provinces had established training colleges to train medics and advance their skills (Dalbock, 1996). By the end of the 1980's the then four South African provinces (The Cape, Natal, Orange Free State, Transvaal), had operational ambulances assisted by advanced life support personnel, and the standards of pre-hospital care had improved considerably (Dalbock,1996). The ambulance and rescue services in South Africa compared with international standards and the advanced level of EMS training was comparable to the best in the world (MacFarlane, et.al, 2004).

Currently, there are two ambulance systems in South Africa; the provincial ambulance services operated by the government such as The City of Johannesburg Emergency Medical Services (COJEMS) and the privately owned ambulance services that are independently operated, for example by Netcare 911 and ER24. The private ambulances services are profit driven, funded by individuals and/or organizations and many are either aligned to or subsidiaries of private hospitals (e.g. Netcare 911 are a subsidiary of Netcare hospitals). Private ambulance services charge patients for their

[6] Source: The South African Military Veterans Association of the USA (SAMVOUSA). [Online] Available at: http://samvousa.org/. [Accessed 01 May 2014].

services, and patients can claim the treatment and transportation charges from their medical insurance.

South African citizens without private medical insurance rely on the public EMS for their immediate emergency care. Although there is a basic charge for services rendered by the public ambulances, the likelihood of the ambulance service recovering the costs is low. One such, large public EMS is the City of Johannesburg Emergency Medical Services (COJEMS). They have a fleet of 118 ambulances but only 50 are operational (Dhlamini, 2014).

1.8 Ambulance practitioner education and training in South Africa

In order to assess the competence of ambulance practitioners and their ability to decide whether or not to transport a non-emergency patient, one must first review the training process.

In 1992 the professional board for emergency care personnel was established and the ambulance practitioner was officially recognised and registered with the then South African Medical and Dental council. The Medical and Dental Council later changed to its current body, the Health Professions Council of South Africa (HPCSA). One of the key components of pre-hospital emergency care is the training and education of ambulance practitioners which has improved considerably in recent years (MacFarlane, et.al 2004). The basic training level recognised by the HPCSA is a Basic Ambulance Assistant (BAA), which requires undertaking a six week theoretical programme. Once a candidate has completed both this theoretical program, and a minimum of one thousand operational hours, the BAA practitioner is able to enter the Ambulance Emergency Assistant (ANA) program which requires a further three months of theoretical education.

After qualifying as an Ambulance Emergency Assistant and working a further one thousand operational hours, the ANA can apply for the final phase which is the Critical Care Assistant (CCA) also referred to as "paramedic" (Macfarlane, et.al 2004). The CCA program is a 9 to 12 month full time intensive training programme designed to teach extensive medical protocols such as paediatric advanced life support (PALS), advanced cardiovascular support (ACLS) and advanced trauma life support (ATLS). Once the student has completed the course they will be able to register with the HPCSA as a paramedic (ANT).

The Bachelor's degree in emergency medical care is registered with the South African Qualifications Authority (SAQA) as NQF level 8[7] which is a four year degree programme. The degree is offered by four Universities in South Africa, the University of Johannesburg, the Central University of Technology, Durban University of Technology and the Cape Peninsula University of Technology. The University of Johannesburg states that the Bachelor's degree in emergency medical care qualification "is designed to produce professionals who are independent clinical practitioners and rescue specialists within the emergency medical care and rescue environments. The qualification will develop cognitive, technological and scientific enquiry capability and promote the research, innovation and management skills necessary for management and development of the emergency medical and rescue professions"[8].

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[7] Source: South African Qualifications Authority, National Certificate Care. [Online] Available at: http://allqs.saqa.org.za/showQualification.php?id=86006. [Accessed 20th June 2015]

[8] Source: University of Johannesburg, [Online] Available at: http://www.uj.ac.za/EN/Faculties/health/departments/emc/coursesandprogrammes/undergraduate/Pages/default.aspx. [Accessed 23 June 2015].

The qualification is designed to produce professionals who are independent clinical practitioners and rescue specialists within the emergency medical care environment. After completing the degree the student will be able to register with the HPCSA as an Emergency Care Practitioner (ECP).

In 2007, the Emergency Care Technician (ECT) program was introduced which is a two year, full time mid-level course rated by SAQA as a NQF level 5. The intention of the ECT qualification is to replace the Ambulance Emergency Assistant course and establish a higher level of qualification at an intermediate level. Students then qualify with an advanced life support scope of practice with certain restrictions, which require the ECT to consult with an Emergency Care Practitioner (ECP) or a medical officer. Details of these restrictions are available from the HPCSA.

The HPCSA guides and regulates the health professions throughout the country. All individuals practicing any of the health care professions are obliged to be registered with the council according to section 17 of the Health Professions Act No. 56 of 1974. Emergency care and ambulance practitioners are registered under the HPCSA Board for Emergency Care (table 1).

Register	Registration Name	Total
ANA	Ambulance Emergency Assistant	8,233
ANT	Paramedic	1,522
BAA	Basic Ambulance Assistant	52,638
ECP	Emergency Care Practitioner	250
ECT	Emergency Care Technician	706
OECO	Operational Emergency Care Orderly	533
EMB Total		**63,882**

Table 1: Source: http://www.hpcsa.co.za/statistics_reg_qual.php [accessed 27th May 2014].

The register comprises of six pre-hospital emergency care registrations. Each register has a number of active pre-hospital registrations. There are 63'882 registered pre-hospital emergency care practitioners in South Africa.

It is important to note that the majority of registrations are basic ambulance assistant, with relatively low numbers of ANT (paramedics) registered with a per population ratio of 1:21 258. The register does not, however, indicate what proportion of individuals are actively working in the pre-hospital emergency medical field. Further research is recommended to establish how many emergency care practitioners are actively engaged in the health care industry, and the pre-hospital emergency care in particular. Govender et.al (2012) stated that: "Compared to globally accepted ratios, the number of ALS paramedics in South Africa can be considered as grossly inadequate. This current shortage may be ascribed to migration. However, the extent and nature of this migration, the factors that have contributed to them leaving the country and the existence or effectiveness of implemented strategies that attempt to manage migration of SA ALS paramedic is not known". This statement is important because ECP's and paramedics are trained at a higher level of medical care and they form the backbone of critical support for the ambulance practitioner. The ambulance practitioner needs to consult an ECP or paramedic when medical interventions must be made that are out of the ambulance practitioner's scope of practice.

Ambulance emergency assistants (AEA) and paramedics (ANT) comprise 13% and 2.8% respectively of registered ambulance practitioners, with the remaining 82.4% qualified at a basic level (BAA). BAA's are registered with the HPCSA under supervised practice which limits their authority to undertake critical decisions such as declining or delaying patient transportation.

Thus, a BAA's decision to delay or decline patient transportation would have to be made in consultation with an independent medical practitioner registered with the HPCSA such as ANA's, ANT's ECP's and Doctors that have an advanced level of skills and scope of practice that enable them to make ethical and legal decisions, unsupervised.

1.8.1 EMS scope of practice

Most of what the ambulance practitioners do within the first hour or "Golden Hour" determines the eventual outcome and potential survival of the patient (Kotze, 1990). Each pre-hospital emergency care qualification has a scope of practice criteria that is prescribed by the Health Professions Council Board of Emergency Care. The scope of practice (Appendix B) determines what medical treatment each ambulance practitioner is registered to execute. For example, a BAA can test a patient for hypoglycaemia and if it is confirmed, a BLS medic is restricted to administering oral glucose which may not be sufficient to correct the patient's condition. The BAA has to rely on an ambulance emergency assistant (ANA) medic to administer glucose intravenously as intravenous therapy is not on the BAA scope of practice. The aim of the scope of practice is to prevent the practitioner from treating the patient outside their level of competency and training and avoid any related negative legal consequences.

Both the BAA and ANA practitioners are limited by their training. Only a paramedic (ANT) can administer higher scheduled drugs such as morphine and make more advanced clinical decisions in a pre-hospital environment. However, the system is handicapped by the lack of qualified ANT paramedics to support the ambulance practitioner and in many cases the ambulance practitioner could be pressurized to

make vital decisions related to patient treatment without the appropriate medical authority. This dilemma is relevant to this report because the scope of practice and training defines the clinical treatment decisions that the ambulance practitioner is able to make. The scope of practice does not include whether or not an ambulance practitioner can decide to decline or delay a patient's transportation because the patient is not a medical emergency. In this report, I argue that guidelines to decline or delay a non-emergency patient transport should be included in the scope of practice for ambulance practitioners specifically for ANA's and ANT paramedics as it could offer performance advantages to the EMS by reducing the volume of unnecessary, non-emergency calls. The EMS could better serve the public by providing an ambulance where it is a medical necessity, particularly in scarce resource situations, when ambulances are in limited supply.

CHAPTER 2: APPLYING ETHICAL PRINCIPLES TO PRE-HOSPITAL EMERGENCY CARE

This chapter explores and critically appraises the expected ethical standards for the emergency medical service (EMS) related to declining or delaying patient transportation in a non-emergency situation. The central question at issue in this chapter is whether a suitably qualified ambulance practitioner can ethically decline or delay transport to level 3 patients – patients who are stable and walking and who do not have emergency status.

I evaluate how theories such as utilitarianism and distributive justice can be applied to the ambulance practitioner if the practitioner declines or delays patient transportation. I will discuss the theory and practice of triage, which prioritises patients according to their medical needs. In certain circumstances, such as mass casualty events or disasters, it is deemed acceptable for an ambulance practitioner to allocate available resources and triage patients, and I argue that this is analogous to the general process of declining or delaying patient transportation based on the gravity of an injury.

This section will discuss the ethical principles of utilitarianism and distributive justice. I will apply each of these principles to the ambulance practitioner and evaluate whether they are applicable in context of declining or delaying transportation of a non-emergency patient.

2.1 The principle of Utilitarianism, its application in EMS and the ambulance practitioner

Utilitarianism deals with the consequences of an action. The act that provides the greatest benefit is considered an ethical action. An action is right or wrong based on its outcomes for total good, or lack thereof.

Rachels and Rachels (2012) discuss the three parts of the theory of utilitarianism which are "actions are to be judged right or wrong solely by virtue of their consequences; nothing else matters" and "in assessing consequences, the only thing that matters is the amount of happiness or unhappiness that is created, everything else is irrelevant" and "each person's happiness counts for the same." Thus right actions are those that produce the greatest balance of happiness over unhappiness, with each person's happiness counted as equally important."

In ideal situations with unlimited resources, utilitarianism might support transportation of every person, regardless of the level of their emergency. However, utilitarianism straightforwardly supports declining and delaying when more good could be achieved by non-transportation that transportation. In cases in which a person is accurately diagnosed as priority 3 (stable and walking), and in which resources are scarce, this will often be the case. This example could be classified under the notion of 'opportunity cost', which plays a key role in utilitarian theory (Van der Wilt, 1994).

Opportunity costs are the benefits that could be produced if the resources are deployed in a different way. According to Van der Wilt (1994), "the utilitarian view does not discriminate between individuals, what matters is that the cost of the 'health gain' is the same regardless how it is achieved and to whom it accrues". If a priority 3 patient is transported in situations of scarcity, the opportunity costs are likely to be higher. This is because in situations of scarcity, transporting a priority 3 patient means that there is a high chance that treatment of a priority 1 or 2 emergency will be delayed, potentially resulting in severe injury and death.

It might be argued that the likelihood of misdiagnosis will reduce potential positive consequences. For this reason, I provide recommendations in chapter 4 that only EMS

practitioners with adequate levels of qualification should be permitted to instigate decline and delay procedures.

Given this, on utilitarian theory, it is justified to decline and delay patient transport, given sufficient qualifications to make an accurate prioritisation decision. In the next section I discuss whether the principle of distributive justice similarly justifies declining and delaying non-emergency patients.

2.2 The principle of distributive justice and the treatment hierarchy.

Distributive justice refers to the fair allocation of available resources. Justice is one of the four principles of biomedical ethics elucidated by Beauchamps and Childress (2013, p.249) the others being autonomy, beneficence and non-maleficence.

Justice is particularly relevant in this context, since it focuses on the distribution and allocation of health care resources (Dhai and McQuoid-Mason, 2011). Distributive justice is cited as "fair, equitable and appropriate distribution of benefits and burdens determined by norms that structure the terms of social cooperation" Beauchamp and Childress (2013, p.253). In the context of heath care it is important to identify what is a fair, equitable and appropriate distribution of health care and its related services, and what criteria are used to decide on the distribution of the available ambulances.

Below I will briefly discuss several models of justice and corresponding criteria and test each theory against the decline or delay of transportation when a patient is a non-emergent. I will argue that reasonable and relevant principles support the claim that it is ethical to decline and delay non-emergency patients.

Hoedemaekers and Dekkers (2003. p.326) characterized distributive justice as underpinned by four model theories: utilitarianism, libertarianism, egalitarianism and communitarianism. I have already discussed utilitarianism and now turn to the others.

According to the libertarian theory of justice "each and every person is responsible for their own healthcare and the provision of health is based on a free market principle". Hoedemaekers and Dekkers (2003) also argue that the strong libertarian model of justice believes that "the person has no right to healthcare and the community has no obligation to distribute health or property." A pure libertarian model is in conflict with the welfare or social state as the liberal model is individually orientated. Which means that the individual, including the poor would have to pay for their health needs. The ambulance service would not be free nor would it be subsidized by the government. Instead, patients would have to choose which ambulance service they would use and have to pay accordingly for the service and treatment provided by the ambulance practitioner. In this case, the poor would suffer and the wealthier social class would benefit because they could afford to pay for the ambulance and/or have private health care insurance to cover the cost.

On the libertarian model all that is relevant is whether and how much the patient is willing to pay. As such, the libertarian principle removes the need for moral justification altogether and so is not relevant to the question at hand, which is directed at evaluating ethical reasons for and against the declining and delaying of emergency transport. The libertarian principle is particularly irrelevant in a South African context since it is contrary to the Constitution of the Republic of South Africa Act, No 108 of 1996 section 27 (1) (a) in that "Everyone has the right to have access to health care services (2) The state must take reasonable legislative and other measures, within its available

resources, to achieve the progressive realisation of each of these rights (3) No one may be refused emergency medical treatment".

Similarly, the Patient Rights Charter section 2 states that " Everyone has the right of access to health care services that include: receiving timely emergency care at any health care facility that is open regardless of one's ability to pay".

In contrast to the libertarian model of justice, the egalitarian model of justice attempts to make all persons equal. The disadvantaged, the chronically ill and handicapped patients are afforded equal opportunity and access to the available health care in a given society. An important aspect of egalitarian theory and its relation to health is the idea that people should have roughly equal levels of health or 'normal functioning' (Daniels 2008. p. 38). One implication of this view is that people with lower health levels should be prioritised in distributing health resources, in the same way that those who are poorer should be prioritised in distributing economic resources. Since priority 3 non-emergent patients tend to be closer to full health, egalitarian theories imply that it is preferable to treat priority 1 and 2 patients first.

The communitarian model of justice deals with distribution of health to prioritise the needs of the community above the needs of the individual. The question then becomes whether the good of the community is best served by declining, or delaying. In other words, this conception of communitarian distributive justice seems to collapse into utilitarianism. Allowing appropriately qualified practitioners to decline or delay treatment to non-emergencies would increase the good of the community by allowing priority 1 and 2 emergencies to be treated first, thereby reducing opportunity costs. Like utilitarianism, communitarianism appears to be in favour of declining and delaying.

The relevant conceptions of distributive justice discussed above support the possibility of declining and delaying transport to priority 3 patients.

However, Cohen (2002) argues that applying distributive justice to medical practice means broadening the healthcare workers perspective and it pushes the healthcare worker to provide health services to the collective group instead of focusing on their individual patients and no patient should receive maximum attention. Cohen states that "distributive justice seeks to substitute a group ethic for medicine's traditional patient-centred ethic". (Cohen 2002, pp.50-55).

To conclude, prioritizing and allocating EMS resources to medical emergencies only applies when the ambulance services are under resourced and there are not enough ambulances to attend to the volume of calls received. There will also most likely be cases where some individuals will suffer more than others.

In the next section, I discuss how declining and delaying patient transport is a form of triage, which is an effective and ethically accepted means of applying a rationing principle to medical emergencies.

2.3 Triage in emergency pre-hospital environments.

The concept of triage is important here as it directly relates to declining or delaying patient transportation of a non-emergency patient. Triage is a word derived from the French meaning "to sort" or "to pick". In the current context, triage is used to assign degrees of urgency to injuries and to decide on the order of treatment of mass casualties[9] when call centre demand for ambulances outstrips supply. Consequently, the EMS are unable to dispatch an ambulance to each and every emergency call.

[9] http://www.oxforddictionaries.com/definition/english/triage [Accessed 14th August 2014]

To resolve this issue the EMS can apply triage to the problem where telephonic triage would be initiated and an ambulance would be dispatched to the most immediate life threatening emergency first. Lin and Anderson-Shaw (2009) argue that triage can be based upon certain forms of utilitarian principles because it attempts to do the greatest amount of good for the greatest number of people. They draw comparisons to an epidemic or large scale disaster wherein medical resources are exhausted and stretched to capacity.

2.3.1 The Stages of triage

According to Iserson and Moskop (2007), Triage may be used in an extended sense to refer to any decision about allocation of a scarce medical resource and therefore requires that 3 conditions be satisfied: (1) There exists at least a modest scarcity of health care resources, (2) a health care worker assesses each patient's medical need based on a brief examination and (3) the triage officer uses an established system or plan, usually based on an algorithm or a set of criteria, to determine a specific treatment or treatment priority for each patient. (Iserson and Moskop 2007. P 276),

Achaya, et al. (2011) lists three phases of the triage process. It starts at the call centre dispatcher who receives the emergency call who then allocates an ambulance to the emergency. The ambulance is dispatched to the emergency which could be a mass casualty event. The second phase is when the ambulance practitioner would triage at the scene of the emergency. At this stage, triage becomes complicated as the ambulance practitioner must decide, based on certain categories, the extent of the medical urgency. Beauchamp & Childress (2013) list four categories of triage. The first category are patients who have sustained life threating but saveable injuries.