attempted control of external bleeding, attempted relief of intolerable and unacceptable pain". In circumstances where a medical condition is less acute and appropriate assessment has been made by a qualified paramedic in consultation with the patient, the patient can refuse hospital transport and the ambulance can safely depart to the next call without recourse.

A comprehensive set of EMS-IROT guidelines can be established for ambulance practitioners to refer to when making a decision to decline or delay a non-emergent patient transportation. These guidelines will be specific to acute non-life threatening conditions. Additional research is needed to evaluate the number of non-life threatening calls received by the EMS call centre, and to ascertain whether or not they makes a substantial difference to total emergency calls transported.

4.3 Limitations to the acceptance and implementation of decline and delay recommendations

Although the law is clear concerning denying a patient emergency treatment it is not clear on declining or delaying transporting a non-emergent patient to a hospital. Additionally, little research has been done in South Africa that specifically deals with the number of non-emergency calls received by EMS call centres and the number of non-emergent patients that are transported to a hospital.

Furthermore, no research has been conducted in South Africa that evaluates the competency of ambulance practitioners when dealing with a decision to delay or decline transport of a non-emergent patient. There has nonetheless been international research relating to the ability of paramedics to assess and triage patients (Silvestri, S., Rothrock, S., et al. 2002 and Snooks, H., Kearsey, N., et al. 2004). These studies found paramedics to be able to triage patients adequately.
However, these two studies more specifically deal with advanced life support paramedic and adequately resourced EMS operations which may not be the same in South Africa as ambulances are manned by a Basic Ambulance Assistant and Intermediate Life Support practitioner.

A further limitation that may inhibit the advance of a decline or delay of a non-emergent patient transportation protocol is the quality of current short course programmes offered by training institutions, such as Basic Ambulance Assistant, Ambulance Emergency Assistant and Critical Care Assistant, none of which have a strong focus on teaching medical ethics and health law. On the other hand, universities Bachelor's degree in Emergency Medical Care programmes are designed with a stronger focus on emergency care and clinical medicine. Whether or not this level of training will better equip the paramedic to deal with decline or delay of non-emergent patient transportation remains to be evaluated in future research.

4.4 Conclusion

Patients will continue to utilize the emergency medical services despite not having a medical emergency and their reasons for doing so will vary. The question in this research report is "When, if ever, is it acceptable for an ambulance service to decline or delay patient transport in a non-emergency pre-hospital environment?". I argued that, utilitarian theory and theories of distributive justice provide an ethical basis for declining and delaying non-emergency patient transport in situations of scarce resources.

This report also addressed the potential problem that the South African Constitution does not allow for patients to be denied emergency medical treatment or access to health care.
However s27(3) refers to a right to Emergency Medical Treatment as discussed. I pointed out that the definition of an emergency is unclear. However, with certain clarifications discussed in chapter 3 of this research report, it may be possible for an ambulance practitioner to decline or delay a non-emergent patient transport, particularly if the ambulance practitioner has treated the patient and the patient is in a stable and not life threatening condition.

It is important to note that generally denying patient treatment and transportation is not the same as declining or delaying patient transportation of a non-emergency patient. Likewise, there is a substantial difference between acute life threatening medical and acute non-life threatening medical emergencies. Without doubt, many acute life threatening conditions such as trauma, heart attack, stroke, severe blood loss and injuries to the body that restricts the person's ability to function normally should be transported to an emergency department without delay. Equally, acute non-threatening conditions, as described by Gray & Wardrope, (2007), can be treated on scene by the ambulance practitioner and a decline of patient transportation protocol could be initiated.

Other countries such as the United Kingdom and the United States of America continue to test various systems and procedures to allow EMS to delay and or decline transporting a non-emergent patient. Current systems that are designed to delay or deny patient transport are designed around rationing resources and allowing EMS to favour more acute and life threatening emergencies first. Despite these systems being implemented there will always be situations when the ambulance is called to transport a non-emergency patient. In many respects, South Africa is not comparable with the UK or USA for reasons already discussed in this research report.
Hence, it would be necessary to evaluate factors that differ between South Africa and the western models before incorporating western policies into a South African EMS refusal of transportation initiative.

There are numerous advantages and risks to implementing and redesigning an EMS system to allow for delay or decline of transport when a patient is classified as a non-emergent. If the advantages for the EMS and the patient out-weight the risk, then it would make sense to proceed with a decline or delay of non-emergent patient transport protocol. The protocol would have to meet the following criteria: It would have to optimize available ambulance resources whilst at the same time attending to true medical emergencies, it would have to provide non-emergent patients access to health care, it would have to be safe for patients, it would not contravene the law and it would have to respect patient rights and patient autonomy.

Word count 17'185
REFERENCES


Available at:


Gray, J. T., Walker, A. 2008. Avoiding admissions from the ambulance service: a review of elderly patients with falls and patients with


Kramer, E., 2008. 'No one may be refused emergency medical treatment' - ethical dilemmas in South African emergency medicine. *South African Journal of Bioethics and Law, 1*(2), 53. doi:10.7196/sajbl.4


The Kwa-Zulu Natal Health Act No. 4 of 2000.

The Medical Schemes Act No. 131 of 1998.

The National Health Act No.61 of 2003.


Available at:


[Accessed 27th February 2015].


### APPENDIX A: Emergency Medical Services - Gauteng Performance Indicators

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>P1 calls with a response time &lt;15 minutes in an urban area</td>
<td>50.00%</td>
<td>50.40%</td>
<td>33.00%</td>
<td>52.00%</td>
<td>Not available at time of report submission</td>
<td>Increase the number of P1 cases responded to within 15 minutes</td>
<td>Reporting from City of Joburg was irregular. There were also sporadic EMS strikes in Joburg. Both these factors would have impacted on response times to P1 calls.</td>
<td>Target not achieved. The department believes that direct control of EMS could improve response times. The process of provincialisation of EMS in the West Rand and Sehlabeng began some years ago.</td>
</tr>
<tr>
<td>P1 calls with a response time &lt;40 minutes in a rural area</td>
<td>#</td>
<td>84.10%</td>
<td>100.00%</td>
<td>95.00%</td>
<td>Not available at time of report submission</td>
<td>Increase the number of P1 cases responded to within 40 minutes</td>
<td>There is increased demand for transfer of maternity cases to distant hospitals when local MOUs are fall.</td>
<td>Target achieved. EMS have been provincialised in outlying areas of Tshwane that were formerly in Metsweding. Challenges here are detected and resolved more quickly and performance has improved.</td>
</tr>
<tr>
<td>All calls with a response time within 60 minutes</td>
<td>#</td>
<td>86.50%</td>
<td>99.00%</td>
<td>77.00%</td>
<td>Not available at time of report submission</td>
<td>Increase the number of P1 cases responded to within 15 minutes</td>
<td>This target was exceeded due to efficient use of limited resources and a slight decrease in overall case load.</td>
<td>Target achieved. Despite shortages in ambulances, Gauteng EMS endeavors to service all calls within one hour. This sometimes requires the use of private ambulance services to ensure for the shortage in the public health sector.</td>
</tr>
<tr>
<td>Green code patients transported by ambulance</td>
<td>135155</td>
<td>113044</td>
<td>#</td>
<td>#</td>
<td>Not available at time of report submission</td>
<td>Better triaging of cases and an overall decrease in case load might have led to the drop in P3 patients.</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>Total number of EMS emergency cases</td>
<td>530908</td>
<td>491435</td>
<td></td>
<td></td>
<td>Not available at time of report submission</td>
<td>Public service strike and sporadic strikes in City of Joburg could have resulted in fewer EMS cases than projected. During FIFA World Cup there was a general reduction in people seeking health services.</td>
<td>#</td>
<td>#</td>
</tr>
</tbody>
</table>

**Source**

Gauteng Department of Health and Social Development Annual Report 2010/11  
Gauteng Department of Health and Social Development Annual Report 2011/12  
Gauteng Department of Health and Social Development Annual Report 2012/13

**Available at**

[http://www.health.gpg.gov.za/Pages/Annual-Reports.aspx](http://www.health.gpg.gov.za/Pages/Annual-Reports.aspx)
APPENDIX B: SCOPE OF PRACTICE

PROFESSIONAL BOARD FOR EMERGENCY CARE PRACTITIONERS RULES OF CONDUCT SPECIFICALLY PERTAINING TO THE PROFESSION OF EMERGENCY CARE

In addition to the rules of conduct referred to in rules 2 to 27 a basic life support provider, an intermediate life support provider and an advanced life support paramedic or a basic life support student, an intermediate life support student and a student advanced life support paramedic shall also adhere to the following rules of conduct. Failure to comply with these additional rules of conduct shall constitute an act or omission in respect of which the board may take disciplinary steps in terms of Chapter IV of the Act:

1. Performance of professional acts by a basic life support provider, an intermediate life support provider or an advanced life support paramedic

   Notwithstanding the provisions of rule 21, a basic life support provider, an intermediate life support provider or an advanced life support paramedic –

   a) shall not perform any professional act or exercise any capability per incident, other than those set out in the relevant protocol or annexure to such protocol as approved by the board;

   b) shall not hand over the responsibility for the treatment of a patient to any person who is less qualified or experienced than himself or herself, unless such a basic life support provider, intermediate life support provider or advanced life support paramedic assumes full responsibility for the acts performed by such other person.

2. Performance of professional acts by a student basic ambulance assistant, a student emergency care assistant, a student ambulance emergency assistant or a student paramedic

   A student basic life support provider shall only perform professional acts under the supervision of a registered intermediate life support provider and, in the case of an intermediate life support student and/or student advanced life support paramedic, under the supervision of a medical practitioner or an advanced life support paramedic and to limit such acts to acts directly related to his / her education and training.
APPENDIX B: SCOPE OF PRACTICE

**MEDICATIONS – BLS PROVIDER PROTOCOLS**

<table>
<thead>
<tr>
<th>NO.</th>
<th>MEDICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Activated Charcoal</td>
</tr>
<tr>
<td>2.</td>
<td>Oral Glucose Powder/ Gel</td>
</tr>
<tr>
<td>3.</td>
<td>Medical Oxygen</td>
</tr>
<tr>
<td>4.</td>
<td>Nitrous Oxide : Oxygen</td>
</tr>
</tbody>
</table>

**ALGORITHMS**

Basic Life Support Algorithm Choking Algorithm

**MEDICATIONS – ILS PRACTITIONER PROTOCOLS**

<table>
<thead>
<tr>
<th>NO.</th>
<th>MEDICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Acetyl Salicylic Acid</td>
</tr>
<tr>
<td>2.</td>
<td>Activated Charcoal</td>
</tr>
<tr>
<td>3.</td>
<td>β2 Stimulants</td>
</tr>
<tr>
<td>4.</td>
<td>Dextrose 50%</td>
</tr>
<tr>
<td>5.</td>
<td>Oral Glucose Powder/ Gel</td>
</tr>
<tr>
<td>6.</td>
<td>Ipratropium Bromide</td>
</tr>
<tr>
<td>7.</td>
<td>Medical Oxygen</td>
</tr>
<tr>
<td>8.</td>
<td>Nitrous Oxide : Oxygen</td>
</tr>
</tbody>
</table>

**MEDICATIONS – ALS PRACTITIONER PROTOCOLS**

<table>
<thead>
<tr>
<th>NO.</th>
<th>MEDICATION</th>
<th>NO.</th>
<th>MEDICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Acetyl Salicylic Acid</td>
<td>18</td>
<td>Ipratropium Bromide</td>
</tr>
<tr>
<td>2.</td>
<td>Activated Charcoal</td>
<td>19</td>
<td>Lignocaine HCl (Systemic)</td>
</tr>
<tr>
<td>3.</td>
<td>Adenosine</td>
<td>20</td>
<td>Lignocaine HCl (Local Anaesthetic)</td>
</tr>
<tr>
<td>4.</td>
<td>Adrenaline</td>
<td>21</td>
<td>Lorazepam</td>
</tr>
<tr>
<td>5.</td>
<td>Amiodarone Hydrochloride</td>
<td>22</td>
<td>Magnesium Sulphate</td>
</tr>
<tr>
<td>6.</td>
<td>Atropine Sulphate</td>
<td>23</td>
<td>Medical Oxygen</td>
</tr>
<tr>
<td>7.</td>
<td>Adrenergic Stimulants</td>
<td>24</td>
<td>Metoclopramide Monohydrochloride</td>
</tr>
<tr>
<td>8.</td>
<td>Calcium Chloride</td>
<td>25</td>
<td>Midazolam</td>
</tr>
<tr>
<td>9.</td>
<td>Clopidogrel</td>
<td>26</td>
<td>Morphine Sulphate</td>
</tr>
<tr>
<td>10.</td>
<td>Corticosteroids</td>
<td>27</td>
<td>Naloxone Hydrochloride</td>
</tr>
<tr>
<td>11.</td>
<td>Dextrose 50%</td>
<td>28</td>
<td>Entonox® Nitrous Oxide and Oxygen</td>
</tr>
<tr>
<td>12.</td>
<td>Oral Glucose Powder / Gel</td>
<td>29</td>
<td>Promethazine</td>
</tr>
<tr>
<td>13.</td>
<td>Diazepam</td>
<td>30</td>
<td>Sodium Bicarbonate 8.5%</td>
</tr>
<tr>
<td>14.</td>
<td>Flumazenil</td>
<td>31</td>
<td>Thiamine Hydrochloride</td>
</tr>
<tr>
<td>15.</td>
<td>Furosemide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Glucagon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Glyceryl Trinitrate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Health Professions Council of South Africa Available Online at: http://www.hpcsa.co.za/PBEmergencyCare/Guidelines
**APPENDIX C: World Health Organisation International Classification of Primary Care codes (ICPC-2)**

**Definition of “non-urgent” encounters**

Based on the ICPC-2 codes of the reason for encounter, Bardelli and Kaplan defined “non-urgent” encounters and categorised them to simplify the presentation as follows:

| "cough/sneezing" (cough [R05], throat symptoms [R21]), encounter initiated by provider [*64], "weakness/tiredness" (weakness [A04], "fear of HIV/other disease" (fear of AIDS/HIV [B25], fear of respiratory disease [R27], “skin problem” (skin problems [S01–S99]), feeling depressed [P03], “dysuria/frequency/urgency” (lower urinary tract problem [U01-U05, U29, U71, U72]), and “others" | sneezing/nasal congestion [R07], "follow-up" (encounter initiator not specified [*63]), encounter initiated by others [*65], fatigue [A05]), fear of sexually transmitted disease [Y25], fear of other disease [A27]), anxious/nervous/depressed” (feeling anxious/nervous/tense [P01], feeling/behaving irritable [P04]), (sweating problem [A09], constipation [D12], suspicion of foreign body in the digestive system [D79], elevated blood pressure [K85], |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Concern about medical treatment [A13], flatulence/belching [D08] | | | | | | | | | | | | |
### APPENDIX C: World Health Organisation International Classification of Primary Care codes (ICPC-2)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>sleep disturbance</td>
<td>[P06]</td>
</tr>
<tr>
<td>chronic substance abuse</td>
<td>[P15, P18, P19]</td>
</tr>
<tr>
<td>memory problem</td>
<td>[P20]</td>
</tr>
<tr>
<td>loss of appetite</td>
<td>[T03]</td>
</tr>
<tr>
<td>social and legal problems</td>
<td>[Z09]</td>
</tr>
<tr>
<td>blood test/monitoring of oral anticoagulation</td>
<td>[*34]</td>
</tr>
<tr>
<td>preventive immunisation/medication [*44]</td>
<td></td>
</tr>
<tr>
<td>medical information/health education/advice</td>
<td>[*45]</td>
</tr>
<tr>
<td>Medication / prescription renewal [*50]</td>
<td></td>
</tr>
</tbody>
</table>

APPENDIX D: Approval from post graduate office

Faculty of Health Sciences
Private Bag 3 Wits, 2050
Fax: 027117172119
Tel: 027117172040

Reference: Ms Thokozile Nhlapo
E-mail: thokozile.nhlapo@wits.ac.za

20 May 2014
Person No: 767179
PAG

Mr D Saunders
PO BOX 1901
CRAMERVIEW
2060
South Africa

Dear Mr Saunders

Master of Science in Medicine: Approval of Title

We have pleasure in advising that your proposal entitled The ethics of declining or delaying patient transport in a non-emergency pre-hospital environment has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees committee and formally approved.

Yours sincerely

[Signature]

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences
APPENDIX E: Ethics clearance

Human Research Ethics Committee (Medical)

Research Office Secretariat: Senate House Room SH 10005, 10th floor. Tel +27 (0)11-717-1252
Medical School Secretariat: Medical School Room 10M07, 10th Floor. Tel +27 (0)11-717-2700
Private Bag 3, Wits 2050, www.wits.ac.za. Fax +27 (0)11-717-1265

Ref: W-CJ-140425-4 25/04/2014

TO WHOM IT MAY CONCERN:

Waiver: This certifies that the following research does not require clearance from the Human Research Ethics Committee (Medical).

Investigator: Mr D Saunders (Student No 767179).

Project title: The ethics of declining or delaying patient transport in a non-emergency pre-hospital environment.

Reason: This study uses information in the public domain. There are no human participants.

Professor Peter Cleaton-Jones
Chair: Human Research Ethics Committee (Medical)

Copy - HREC(Medical) Secretariat: Anisa Keshav, Zanele Ndlovu.