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Emergency Medical Services and Public Policy in Durban, Kwazulu-Natal

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EMERGENCY MEDICAL SERVICES AND PUBLIC POLICY IN DURBAN, KWAZULU-NATAL

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Abstract

This project seeks to explore the realities of the emergency medical system in the Durban area, particularly relative to government policy. It contextualizes its findings within the literature on public policy. Data for the project was collected via nine in-depth interviews with various professionals working in the field of emergency medical services, as well as a survey of fourteen citizens conducted in the peri-urban township of Cato Manor. This data was analyzed using qualitative methods. While every participant had different views and a different perspective on emergency services, some recurring themes and trends became evident, allowing for conclusions to be drawn.

The government-run emergency services in the Durban area do not measure up to the standards laid out by official government policy, often responding significantly slower than the national benchmark for response times. Many private ambulance companies have stepped into the gap in the market that this discrepancy creates, and are often significantly faster than the government services. This public-private dynamic fits an established model in policy literature of hybrid governance, in which third parties provide some of the services that the state would usually provide. However, despite official regulations, even private services also often deliver low-quality care to patients, particularly the smaller, so-called “fly-by-night” companies. There are many different possibilities as to how the state could improve the system, such as devoting more resources to the government service, further enforcing regulations, or creating a unified emergency call center. Unfortunately, none of these possibilities is without problems, and many participants were skeptical of whether any intervention could improve the system.

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Frequently Used Acronyms and Technical Terms

- **EMS**: Emergency Medical Services
- **EMRS**: Emergency Medical Rescue Services, the government-run emergency service in KwaZulu-Natal
- **KZN**: KwaZulu-Natal
- **NHI**: National Health Insurance, the insurance system being implemented throughout South Africa
- **RAF**: Road Accident Fund, a government-run fund that pays for some of the medical expenses for victims of traffic accidents
- **SAHRC**: South African Human Rights Commission, a national institution created to protect and promote human rights

Introduction

"Fast like 9-1-1 in white neighborhoods" – J. Cole

Few people ever plan to need an ambulance. Indeed, one of the terrors of medical emergencies is that they are so unexpected, and could potentially strike at any moment. It is in these moments that the local emergency medical service, which might otherwise rarely cross one's mind, becomes critical. However, during apartheid, South Africa's emergency medical system barely served large swaths of the population, namely nonwhites. In fact, in some parts of the country, no ambulance service existed at all (Macfarlane, Van Loggerenberg, & Kloeck, 2004, p. 146). Where services did exist, care was sharply divided along racial lines; ambulances were designated to carry either white or nonwhite patients, a rule that was "enforced even when an ambulance of the 'wrong' colour was within reach" and could save the patient's life. Although whites received better care in general, this rule ironically had the potential of affecting all races adversely, as in the case of a Mr. Jenkins, a white man who was stabbed by his wife in a coloured township. Because the paramedics had assumed he was coloured when they got the call, they brought a coloured ambulance and were thus unable to take him. Mr. Jenkins reached the hospital hours later and died shortly after arrival (Bell, 2006, p. 67).

The system has changed significantly since the end of apartheid in 1994. For one, enforced inequality in emergency care is no longer government policy. In its place is the African National Congress's 1994 promise that "all communities must have access to emergency services," regardless of race (African National Congress, 1994, p. 35). The 1996 Constitution then codified this promise into law, stating that "no one may be refused emergency medical treatment," and that everyone has the right of access to health care services (Constitution of the Republic of South Africa, 1996, Chapter 2, Section 27). However, the system has also evolved in other ways since apartheid's end; the shift has been partially characterized by the emergence of a robust for-profit private ambulance industry. This emergence includes the two biggest players in the business, Netcare911 and ER24, which were founded in 1998 and 2000, respectively, but also dozens of smaller companies (Mediclinic, 2016, n.p; Netcare Group, 2016, n.p.).

Of course, a transformation in the system is different from actually creating a functional ambulance service, and to this day emergency medical services (EMS) in South Africa are widely perceived to be desperately in need of improvement. This negative perception is

particularly present regarding the government-run service, which is plagued by long response times seen by some as unacceptable. For example, in 2007, the South African Human Rights Commission (SAHRC) reported that the public ambulance service "for some hospitals is at best inadequate and at worst non-existent" (SAHRC, 2007, p. 42). However, it is also true of private ambulance services. Although these services are mainly intended for patients with medical aid, they can also be inadequate and are sometimes accused of delivering low-quality care to patients.

Given these glaring issues, I plan to explore the state of public and private EMS in Durban and the surrounding area, particularly relative to government policy, and discuss ways in which these services could potentially be improved in the coming years, situating my findings within the relevant policy literature.

Context and Literature Review

Context

KwaZulu-Natal (KZN) is the second largest province in South Africa with over 11 million people, making up nearly 20% of the country's total population (Statistics South Africa, 2016, p. 2). It sits in the southeast corner of the country on the Indian Ocean, and its largest city is Durban. The population of Durban is about 3.2 million. 68% of its residents are black, 20% are Indian, 9% are white, and the remaining 3% are coloured (KwaZulu-Natal Department of Health "Durban Metro", n.d., n.p.). In the Durban area, as in the rest of KZN, Zulu is the primary language of black South Africans.

I conducted the survey portion of this research in Cato Manor, a peri-urban community of about 70,000 people located seven kilometers outside of Durban (Laurence, 2014, p. 7). A majority Indian area pre-apartheid, Cato Manor is now predominantly black and is plagued by many social and economic ills such as unemployment and poverty. These ills are not exclusive to Cato Manor, as they plague many townships—often-underdeveloped areas outside South African cities that were usually zoned for nonwhites during apartheid and remain largely nonwhite (Beall and Todes, 2004, p. 305; Pernegger and Godehart, 2007, p. 2). Although I was unable to find exact statistics on medical aid coverage in Cato Manor itself, Statistics South Africa in its 2015 General Household Survey estimated that only 11.9% of KZN's population has medical aid, and only 7.7% of the province's black population (p. 110). These numbers give some estimate of the medical aid coverage within this community.

Current Policy

On the basis of sweeping, idealistic documents including but not limited to the Constitution and the African National Congress's National Health Plan, emergency medical care is now available to anyone in South Africa who calls the toll-free emergency number (Macfarlane *et al.*, 2004, p. 146). Each province runs its own public EMS, which in KZN is the Emergency Medical Rescue Services—EMRS (Ashokcoomar, 2012, p. 6). In addition to the government services, private ambulances from companies such as ER24 and Netcare911 are available to those who call their respective numbers.

Although running the public ambulance services is on a province-by-province basis, some Department-of-Health-specified national standards guide the goals and benchmarks for the quality of public emergency care. Notably, these standards suggest that there should be one ambulance for every 10,000 citizens. In addition, they recommend ten EMS staff members per ambulance, and two staff members per ambulance per shift (SAHRC, 2015, p. 27).[1] The national standards for ambulance response times are 15 minutes in urban areas and 40 minutes in rural areas. In order to be compliant, provincial services must respond within these time frames in at least 80% of the cases (SAHRC, 2015, p. 58).

Each provincial government also has the responsibility of regulating private ambulance companies, in accordance with national policy guidelines passed in 2015. According to the regulations, each private service must apply to the provincial Department of Health for a license to practice before beginning to operate and must renew the license annually (Department of Health, 2015a, p. 31). During this licensing process, the province must inspect the service and verify compliance with certain minimum standards, such as having a manager with at least Intermediate Life Support qualification, having a 24-hour base, and having appropriate vehicle washing facilities with the requisite medical waste traps, among others (Department of Health, 2015a, p. 10). These regulations are at least partially based on policies that the Western Cape has had in place since 2010, which have similar inspection and licensing requirements (Western Cape Department of Health, 2010, p. 3).

Current Practice

While this may all seem like sound policy upon the first read, the reality is unfortunately quite different. Perhaps the most apparent difference between policy and practice is in public ambulance response times. In 2004 Macfarlane *et al.* declared that no ambulance service outside of Johannesburg "manages to achieve [the 15/40 minute standard] with some degree of regularity" (p. 147). The situation seems to have worsened since then, even in Johannesburg, where ambulances now only respond to 54% of calls within the requisite 15 minutes (Mkize, 2016,

[1] While the standard of one ambulance per every 10,000 citizens is cited frequently in the observed literature and interviews, the original document itself could not be found. The South African Human Rights Commission reported similar difficulty in finding the actual document, saying that they requested it from the Eastern Cape Health Department but never obtained it, and that the standards could not be obtained through outside research (2015, 27).

n.p.). In Durban, EMRS paramedics report that they can take hours to get to emergency calls. As one anonymous paramedic said, "Sometimes we get to the emergencies and the person has already died. More often than not, we arrive at the scene to find that the people who have called are so fed up that they have bundled the patient into a car and rushed them to the hospital" (Wicks and Hlongwane, 2013, n.p.). This description is consistent with the SAHRC's report on government EMS in the Eastern Cape, which claimed that a wait time of 10-14 hours was standard there (SAHRC, 2015, p. 59). In the most extreme cases, wait time can be upwards of a day. For instance, the same SAHRC report told of the case of a critically ill child whose parents called the emergency number. The operator told them that an ambulance was on its way but first had to be filled up with petrol; the ambulance ended up arriving 29 hours later, after the child passed away (SAHRC, 2015, p. 59). While this report was specific to the Eastern Cape, it is reasonable to believe that the situation in KZN may be similar. These response times are of particular concern when viewed in light of the so-called Golden Hour, a principle of emergency medicine which states that "the sooner trauma patients reach definitive care the better their chance for survival" (Eisele, 2008, n.p.). Thus, with each passing minute or hour that ambulances do not come, the patient's chances of survival decrease.

At the root of these slow response times, among other factors, is a shortage of ambulances. For KZN to meet the standard of one ambulance per 10,000 people, it would need over 1,000 ambulances. It has 212, drastically fewer than the target number (Wicks and Hlongwane, 2013, n.p.). Without enough ambulances to process requests, it is easy to see how paramedics and emergency workers find themselves in situations where they simply cannot promptly respond to all the calls they receive, resulting in long wait times for patients.

Other issues contribute to the less than ideal quality of government-provided pre-hospital care. Also near the top of the list of complaints is the absence of equipment within the ambulances, as the SAHRC found that many in the Eastern Cape reported a consistent lack of oxygen and regulators. In some cases, ambulances were found to be completely bare inside, with no equipment at all (SAHRC, 2015, p. 52). Within Durban EMRS, literature reports less extreme but still serious issues, such as leaky oxygen valves, broken flow meters, and missing door panels (Tapper, 2011, p. 22). Naturally, with deficient or nonexistent equipment, providing acceptable levels of care becomes more difficult, at times impossible.

It is important to note that the problems described above are all concerning public ambulance services. As one might expect, private services are generally much faster, with ER24 reporting an average response time of 22 minutes in Durban (Wicks and Hlongwane, 2013, n.p.). However, even private EMS is not without problems. Although there is a dearth of formal literature on the topic, several news articles from recent years tell of issues with so-called "fly-by-night" ambulance companies in the Durban area. These companies are different from larger providers, not solely because of their size, but also due to a lack of institutional backing. For example, ER24 is owned by Mediclinic and Netcare911 is owned by Netcare Group, both large corporate health care providers (Mediclinic, 2016, n.p; Netcare Group, 2016, n.p.). Conversely, "fly-by-night" providers might be as small as one ambulance and be owned by the ambulance's paramedic. In addition, sometimes they are unlicensed or employ medics without the requisite training (Dorasamy, 2014, n.p.).

The Road Accident Fund and Traffic Accidents

According to the sparse literature, these small companies make some money off medical aid schemes but also heavily rely on the government-run Road Accident Fund, or RAF (Waterworth, 2016, n.p.). The RAF is a fund established by the 1996 Road Accident Fund Act, designed to financially compensate "for damage wrongfully caused by the driving of motor vehicles" (Parliament of the Republic of South Africa, 1996, p. 3). Notably, this includes paying for any medical costs incurred as a result of injuries caused by an accident. It also specifically includes paying for emergency medical services, as the Act says that these costs will be covered and "negotiated between the Fund and health care providers, and shall be reasonable taking into account factors such as the cost of such treatment and the ability of the Fund to pay" (Parliament of the Republic of South Africa, 1996, p. 10). In practice, this payment system seems to function fairly effectively; one major accident claim law firm's website advises that "you have a claim for medical expenses and that is normally quite simple: you keep a record of all accounts that are related to the accident and your attorney claims them back from the Road Accident Fund" (De Broglio Attorneys, 2015, n.p.). Other websites on this topic had similar advice (Western Cape Government, 2015, n.p.). In other words, if a private ambulance company bills a patient for transport from an accident scene to the hospital, the patient can just refer the bill to the RAF and

the Fund will pay, even if the patient does not have medical aid and would not otherwise have been able to pay.

Looking for payouts from this fund, the aforementioned smaller ambulance services reportedly often race to ambulance scenes and load as many patients as they can into the ambulance, not always providing them with the proper treatment along the way. Then, they drop everyone off at the hospital and collect payment from medical aid schemes or the RAF for each of the patients treated (Waterworth, 2016, n.p.).

Plans for Improvement

To its credit, the government is making efforts to change the system and improve emergency medical care. In the short term, the KZN Department of Health has prioritized purchasing new ambulances and repairing faulty ambulances faster, as to have a larger available fleet at any given time. It has also committed to increasing efficiency through consolidation of communication centers, improved triage, and improved routing of patients, all of which could potentially lead to improved response times (KZN Department of Health, 2015, p. 149). However, articulating these plans is entirely different from actually implementing them; a quick glance at the department's goals from the previous year concerning ambulance care reveals that a majority of these goals were never realized (KZN Department of Health, 2015, p. 146).

Longer-term changes to the emergency medical system primarily revolve around the National Health Insurance plan (NHI), which will overhaul the country's entire medical system over the upcoming decades. According to the White Paper on the NHI, the government will "contract with accredited providers of EMS in the public and private sectors" in an effort to provide "a uniform level of quality for EMS across the country" (Department of Health, 2015b, p. 44). Although the White Paper itself does not explicitly mention improving ambulance response times or regulating fly-by-night companies, it does lay out some specific measures on how to provide this uniform level of care, such as a single call center for both public and private services and mandating that all ambulances have the same colors on the outside (Department of Health, 2015b, p. 44).

Methodologies

Overview

I lived and researched in Durban, KwaZulu-Natal throughout the duration of this study. When collecting data from professionals in the EMS field, the primary method employed was semi-structured interviews. When collecting data in Cato Manor, the primary method was a two-page survey. I also used secondary sources to help gain a greater understanding of the situation regarding EMS in Durban and contextualize it within the relevant policy literature.

Sampling Plan

In order to learn more about the issues plaguing EMS in the area and how the government can improve the service, I spent the first phase of the study attempting to talk to as many professionals in the industry as possible. This process primarily consisted of calling various ambulance services or arriving at their base unannounced and asking to set up an interview with anyone who was willing. In other words, sampling was largely based on whom I could successfully contact and who would speak with me. Snowball sampling also played a key role in this process, as many interviewees had suggestions of other bases that I could visit or other EMS professionals who might be willing to talk. In the second phase of the study, I primarily intended to explore the relationship between the ambulance services and the poorer township communities outside Durban. For two months prior to the study, I lived with a family in the Masxha neighborhood of Cato Manor. Because of Cato Manor's status as economically disadvantaged and my status as a quasi-community member, Masxha was an ideal place to conduct this portion of the study. During this phase, I used snowball sampling and contacts from my stay to survey as many willing community members as possible about their experience with ambulance services and whom they would call if they had an emergency.

In total, I interviewed seven EMS professionals working for private companies, one trauma nurse working in a government hospital, and one journalist. I also administered a survey to fourteen members of the Cato Manor community.

One important limiting factor to this sampling plan is the difficulty I had in accessing government employees. When attempting to contact government EMS employees for interviews, I repeatedly was directed to a formal research application process for all projects conducted

within the KZN Department of Health, which unfortunately was not practical or realistic given the time constraints on the project. Conversely, private companies and their employees were generally happy to accommodate me. Because of this, almost all of the interviews were with people working in the private EMS industry, which has potential to bias the results.

Within the private sector, employees of larger companies such as ER24 or Citimed were far more accessible than those working for smaller companies. This disparity is because the large companies generally have up-to-date websites and publicly available data on locations of their bases. Conversely, some of the smallest services either do not have websites or listed phone numbers that were no longer in service. Because of this, I mostly spoke to employees of larger companies. Even within the category of smaller companies, I suspect that the services readily available via the Internet tend to lean towards the more legitimate and higher-quality end of the spectrum, leaving me unable to contact the truly small and informal services. These issues again have the potential to bias the data, as those working for large companies have very different perspectives on the question of regulation than those working for small companies, and more legitimate smaller companies may also have different perspectives than the smallest and least formal services.

Another important limit on these methodologies was the narrow nature of the survey. Although it was intended to assess the relationships between the townships around Durban and local EMS, particularly smaller private companies, the survey results in reality only give data on the experiences and opinions of fourteen members of one small neighborhood of one particular township. Other communities, both within Cato Manor and within the many different Durban-area townships, may have very different relationships with emergency services, and therefore the survey results cannot be seen as representative of the entire Durban area.

All aforementioned limitations should be kept in mind when drawing conclusions from the data.

Data Collection

Among the participants in the EMS industry, interviews took place in a number of locations, such as the participant's EMS base or a local coffee shop. Because the interviews were semi-structured, I prepared a set of questions to help guide the conversation. Although these questions varied somewhat interview-to-interview based on the specific characteristics of each

interviewee, they followed the same themes and issues. A sample interview guide can be found in Appendix 1. It should also be noted that I would ask follow-up questions and adjust lines of questioning mid-interview based on the flow of the conversation, and thus did not follow the prepared interview guides exactly. I recorded each interview on my cell phone with the interviewee's permission.

Before the first three interviews, I asked whether the interviewee would like to remain anonymous or if I could use his or her name. However, this question seemed to make people slightly uncomfortable, which may then have affected the tone of the interview. In order to avoid this issue for the rest of my interviews, I decided to keep all participants completely anonymous and remove all unique identifiers. After these initial three interviews, I informed all participants that they would be kept anonymous before the conversation began.

Among those surveyed in Cato Manor, surveys were generally administered in the participants' homes, as this was the most convenient location. Participants were given the option of either filling out the survey on their own or having me talk them through the questions individually. Because many participants struggled with reading and writing English, they often chose the latter option. When participants did not understand one of the questions, I explained it to them in different words. The survey administered can be found in Appendix 2. It should also be noted that I told all Cato Manor participants that their identities would be kept anonymous before beginning the survey.

I collected data from secondary sources via searches through various databases, such as Google Scholar, JStor, and PubMed. I also gathered gray literature through searches on Google's main search engine and found secondary sources via recommendations from various academic advisors, both formal and informal.

Data Analysis

I analyzed the data using qualitative methods. With respect to the interview recordings, I first listened to the interview straight through without interruption and then listened through a second time in order to transcribe the conversation. Transcription, when done carefully, has been established to be an important part of the reflection process during qualitative research, and can assist in meaning-making after many extensive in-depth interviews (Oliver, Serovich, & Mason, 2005, p. 14). With this literature in mind, I then spent substantial time after the transcription

process reading over all the transcripts and surveys and identifying different themes and arguments that repeatedly occurred, as part of the process of triangulation. With respect to the survey results, I read through all the responses twice and took notes on interesting responses. I was particularly interested in participants' experiences with different ambulance services in the past and whom they said they would call if they had an emergency today.

I also viewed all of this data through the lens of various literature sources on public policy and policy implementation, in order to give the data analysis a stronger theoretical basis and further assist with triangulation.

Ethics

Owing to the nature of this study relying on interviewees sharing their personal opinions about the nature of their work, which in some cases needed to remain confidential, the research was first subject to review by a Local Review Board. The Review Board examined the project for ethical concerns and approved it (see Appendix 3). The research also complied with SIT Study Abroad's Statement of Ethics and Human Subjects Research Policy. All participants were asked to read and sign an informed consent form before conducting an interview or taking the survey. In addition, I asked all interviewees for their permission to record the conversation.

When interviewing EMS employees and experts, the primary ethical concern was that participants could face negative repercussions for the content of their interviews, from employers or even friends. For example, several participants who work for private ambulance companies repeatedly clarified that they were only stating their personal views, rather than the official positions of their employers. This issue, however, was resolved via the decision to keep all participants anonymous and remove all unique identifiers. Although some characteristics of each participant are included, such as their job title and in some cases what company employs them, I carefully considered which facts to reveal as to give the reader the necessary context without compromising anonymity. In addition, all interview recordings and transcripts are kept on my password-protected devices and thus cannot be accessed by anyone else.

One advantage of the nature of the interviews and surveys was that they placed me in the position of a learner, with the participants explaining aspects of the system to me. This relationship assisted in altering traditional power dynamics in which a researcher has significantly more power than a participant (Glense, 2006, p. 94). Throughout my research, especially in Cato Manor, I was particularly conscious of these power dynamics and ethical issues and made it my utmost priority to conduct my research in a way that was ethical and respectful.

Findings

State of the Public Ambulance System

Participants almost universally painted a bleak picture of public ambulance services in the Durban area, particularly honing in on the issue of response times. As Participant 1, a paramedic for ER24, said of the government services, "They're flooded every single day" (2016). When asked how long EMRS's response time would be, from the moment an emergency call was placed to the moment the ambulance arrived, Participant 1 estimated that the government services "average between one to two hours in the city" (2016). While responses to this question varied somewhat and no participants knew the exact statistics, they generally agreed with this time range.

However, even this wait is short compared to what participants felt may face those in townships needing an ambulance. When asked about township EMRS response times, Participant 1 upped his estimate to three or four hours, and Participant 2, an owner of a small township-based ambulance company, suggested that a patient might have to wait "a day or so" (2016). Citizens of Cato Manor, when asked how long EMRS took the last time they called for a public ambulance, reported a range consistent with these estimates; while some claimed waits as short as 30 minutes or an hour, four of the eight Cato Manor citizens who had called EMRS in the past reported that the ambulance simply never came and that they had to get to the hospital through other means. This poor service led to a sharp dislike of EMRS among some members of the Cato Manor community, including Participant 3, who said, "We don't trust them" (2016). She also claimed that she would not call an ambulance at all if she had an emergency, and would instead ask a neighbor or friend for a ride (Participant 3, 2016).

While response time dominated the discussion of EMRS, it was not the only problem that participants identified with the government service. Several Cato Manor citizens also complained about the attitude of EMRS personnel, who Participant 4 claimed "don't have respect and sometimes don't take things seriously," noting the time that the EMRS paramedics told her that her sick, elderly neighbor was going to die soon anyhow (2016). In addition to response times and staff attitudes, Participant 5, a journalist with experience working in and writing about EMS, claimed that lack of adequate equipment and resources was a major issue. As he said, "You have

these massive fleets of public ambulances where the equipment is just disgusting. It's a massive breakdown of the public health care system" (2016).

While the participants did not view the government services described above as perfect or even satisfactory, they often pointed out that the services are affordable and even free, as opposed to the private companies, which are mainly intended for those who can pay or have medical aid. The responses of those in Cato Manor demonstrated the critical importance of cost; even though they described all of the above problems, nine of the twelve Cato Manor participants without medical aid reported that they would still call EMRS the next time that they had an emergency. When asked why, the answer was the same every time: they could not afford anything else.

Overview of the Private Ambulance System

In addition to EMRS, the Durban area has what Participant 1 estimated to be thirty-nine or forty private ambulance services (2016). Every participant familiar with the private services reported times far faster than what EMRS is capable of providing. Participants 1 and 6, both employees of ER24, reported their average response time to be fifteen minutes (2016). Participant 7, a paramedic for Citimed Ambulance, also reported fifteen minutes as their average (2016). Participant 8, a paramedic for a small ambulance company in a Durban suburb, claimed that they usually arrived within ten to fifteen minutes (2016). Finally, Participant 2, the owner of the small township-based company, also claimed around ten to fifteen minutes on average for his service (2016).

However, some disputed the extent to which these response times were accurate for the entire population or whether they were only a reality for those with medical aid. As Participant 5, the journalist, said:

> With a company like Netcare, you're going to call, and it goes to a national emergency control room where all the calls are recorded. They know that they can't refuse care, but it's kind of like an unwritten rule that they'll sometimes say they have no ambulances available [if the caller says that they do not have medical aid.] – Participant 5, 2016

He felt that this was also true for smaller companies with a less formal infrastructure, where people "get told an ambulance isn't available, but you see them sitting under the trees" (2016). Indeed, when I asked Participant 7 if having medical aid or not affected the speed with which

other private ambulance companies got to the patient, he merely laughed before saying that he could not talk badly about other services (2016).

"Fly-By-Night" Ambulance Companies

Interestingly, despite the well-documented issues with public sector ambulances, many participants felt that the single biggest problem plaguing EMS in the area was the number of small "fly-by-night" services, which Participant 7 reported were "mushrooming up everywhere" (2016). Participant 5 explained the cause behind the rise of these companies:

> People realized that they could make a lot of money off of it. If you look at all of these smaller private services, they're just offshoots of one another. So you had guys who used to work for Netcare and then went on their own. You can make millions! So they realized that if you did even a fraction of the billable calls of Netcare you could make a tidy profit for yourself. Their staff then realized, 'Oh, this guy drives a [sports car] and we only have eight ambulances' so they break off and do *their* own thing. – Participant 5, 2016

Some participants explained that although these companies do not have the name or brand recognition of larger companies like Netcare911 or ER24, and thus may not receive the same quantity of calls, they make money through other means. Some of their business comes from being forwarded calls from the provincial service and large private services; Participants 2 and 8, both of whom are affiliated with small community-based companies, both mentioned being forwarded calls by EMRS, ER24, and Netcare911 when the larger services felt that they would not be able to get to a call in time (2016). I also saw this occur first-hand, as Participant 2 got a call from a friend in EMRS in the middle of our interview asking if he could assist with an emergency call.[2]

However, participants also explained that most of small services' business comes via other, often less legitimate means. Small companies are often first to the scene of traffic accidents after hearing about them on the radio or from paid contacts in the tow truck industry (Participant 1, 2016). In fact, several participants reported that a car crash in Durban could draw many of these small ambulance companies to the scene; Participant 1 said that he would estimate

[2] Interestingly, although this semiformal coordination between services does occur to some extent, it does not appear to be widespread enough to have a meaningful effect on overall EMRS response times, as Participants 2 and 8 said that the coordination was not a significant portion of the business of their small companies (2016). In addition, no Cato Manor residents referenced calling the government number and being treated by a private ambulance that had been sent in its place. Thus, while this topic is potentially very interesting, participants did not seem to feel as if it had a large impact on EMRS response times or private sector business, so I chose not to discuss it at length in this paper.

the average would be as "eight ambulances or even more" (2016). When asked why so many ambulances would arrive at one traffic accident even though those in townships and other areas had to wait so long for any service to come, participants usually cited the RAF. Because the Fund pays the medical costs of accident victims, even if patients do not have medical aid the ambulance service will still be paid for the transport, making a crash site a lucrative opportunity (Participant 7, 2016). In fact, these accidents are so important to the smaller services that, according to Participant 1, "If the Road Accident Fund had to close down, you'd find that all of these [small] services would shut down… Accidents are where their money is. They'll very seldom go to medical calls" (2016).

Participants reported that this system creates problems; because the RAF or medical aid pay companies a certain amount for each patient transported to the hospital, this system incentivizes quantity of patients instead of quality of care. One problem repeatedly mentioned is that rather than working together to treat patients, these small services often compete with each other for patients, even fighting as people lie injured. Participant 5 explained below:

> The competition is stiff. Like, fighting over people at accident scenes. Literally, fistfights! Literally, assault charges against each other. 'Ambulance Wars' is a perfect headline for that because they literally fight with each other for patients. Because it's money. The very least you're going to get out of a patient, one patient, one green code, minor, walking wounded patient is R3000. Why wouldn't you do that? – Participant 5, 2016

Once the patients actually enter the care of the services, participants reported that the situation does not improve. Reportedly, medics might load "ten or twelve" patients into the ambulance at a time, knowing that medical aid or the RAF will pay for each patient transported (Participant 6, 2016). These patients might be loaded into an ambulance even if moving them is potentially harmful to their health, as Participant 7 told of companies "taking patients with a spinal injury and not giving them any head support, anything," among other issues (2016). As bad as this sounds, the patients loaded into the ambulance quickly are actually the lucky ones, as services will reportedly "leave the critically injured patient that's going to take up all the resources," knowing that they will make less money if they take one patient who requires a lot of attention versus if they take ten who require very little (Participant 5, 2016).

Not all participants agreed with this harsh assessment of smaller ambulance companies. Notably, Participant 2 defended his small company and claimed that smaller services were

important within townships and poorer communities that cannot afford to be treated by one of the larger companies. As he said:

> So the reason [my company] was established was because of the need that we saw within our community, because our community could not afford the big ambulance services. They have a set rate that they charge according to because they are a big organization. So what we try to say is, 'This is our community, we live in our community, we understand that they do not have money, but we cannot deprive them of medical assistance.' We are way cheaper than ER24 because, for one call to a township, ER24 might charge R2000. And we can do it for R500. Or R300. Or even for free, because for us the cost isn't as much as it is for ER24… You can take a drive, any township of your choice. Drive the entire township and tell me if you see an ER24 ambulance. You choose the place! And tell me if you can see a Netcare or ER24 ambulance. You won't see them, but you will see the smaller services because they're within those communities. – Participant 2, 2016

While he admitted that "maybe [larger companies] have more advanced equipment," than his service, Participant 2 insisted, "We have what is needed" (2016). He also argued that stories of poor quality of care by smaller companies are overblown and that while "everyone makes mistakes," big ambulance medics had a tendency of going to the media with stories exaggerating the poor quality of smaller services. He attributed this behavior to the fact that the large companies are "feeling the pain" of competition (2016).

Participant 2's interview was inconsistent with other interviews; while he insisted that smaller services were critical to townships and poorer communities, other interviewees disagreed. Among the dissenters was Participant 5, the journalist, who claimed that this argument was "complete bullshit" and that small services were in fact generally less likely than their larger counterparts to pick up poorer patients (2016). In an attempt to reconcile these different stories, I asked community members in Masxha their opinions on various ambulance companies and whom they would call in an emergency. Tellingly, none of the fourteen Masxha participants named a small service when asked what ambulance services they had called in the past or who they would call if they had an emergency today. Rather, nine of the fourteen participants said that they would call the government service and the four who mentioned private services in response to these questions named three of the biggest services in the business: ER24, Netcare911, and Citimed.[3]

[3] Only thirteen of the fourteen participants said that they would call an ambulance at all. As noted earlier, Participant 3 said that she would not call because she could not afford a private ambulance and did not trust government ambulances. Instead, she would ask a friend or neighbor for a ride (2016).

How Can We Improve?

Participants generally agreed that in order to improve EMRS in the long run, response times would have to be improved, which would inevitably mean devoting more resources to the government service. As Participant 5 said, "They need to be better resourced, better equipped, better funded, because that's where the problem is. Because they're completely overwhelmed, and there's just too much to do" (2016). Participant 1 agreed, saying, "Response times would be the one thing that would better their service. It all depends once again on manpower, infrastructure, and vehicles." However, like many participants, he also expressed doubt as to how conceivable this was, asking, "They're getting the vehicles and the infrastructure back and starting to get the manpower, but with a growing population are we ever going to have enough vehicles?" (2016).

Another policy fix often came up when discussing potential ways to improve the ambulance system: enforcing already-existing regulation of the private ambulance industry, especially involving the smaller "fly-by-night" companies. However, participants were skeptical of this plan as well. Participant 5 laid out his concerns below:

> The regulating is the first step. Because if you look at the new regulations, there's a minimum standard. They have to have a base; they have to have a wash bay with proper plumbing so you can clean bloody ambulances and stuff like that. And that, in theory, should rule out a lot of the smaller private services. But none of this is in effect. And then once it is, who's going to police that? They'll find a way around it. – Participant 5, 2016

Participant 1 also favored enforcing regulation but had similar worries about how this would look in practice:

> In terms of regulating, you're going have to get a team to regulate it correctly that are not going be biased in any way, and that are not going to take bribes. That's what's going to happen. People are going try and give you bribes… I would say you have to find old school paramedics who are still passionate about the job and passionate about how they do it. And they need to go from base to base to base and make sure that everything is in place. And that's the only way you can cut down and stop those services. Tell them that they can't operate. And that's the only way it could get done. And I feel that then you would see better patient care, better treatment, and better response times. – Participant 1, 2016

However, not all participants favored enforcing these regulations in the first place, at least not to the point of shutting smaller services down. Participant 2, when asked about the issue,

reiterated his earlier argument about how the small services were critical to the townships (2016). He also added:

> It would be a big blow for the government itself because at the moment the government can't reach most of the townships and rural areas. There's still a lack of services. So imagine if they just come down and cut us off! A lot of people would die… They can't just come and make the rules. You need to make me understand. You need to make sure that you guide us because they need our assistance. – Participant 2, 2016

Participant 8, who works for a smaller service, assumed a stance somewhere between Participant 2 and the others. He generally agreed with Participant 2 on this point, saying, "There is definitely a place for smaller services, they can definitely be helpful" (2016). However, he also favored some degree of stiffer regulation, adding, "They probably do need to be monitored a little more. I mean, scooping eight or ten people into an ambulance? There's really no place for that" (2016).

I also asked participants about concrete changes that the national government is attempting to implement in order to improve the emergency medical system, such as the EMS-related provisions of the NHI and the Minister of Health's recent announcement of plans for one centralized ambulance call center. Like the previous policy proposals, their responses were decidedly mixed. On the one hand, some participants were optimistic, such as Participant 7, who felt that while "it would take a really long time," these proposals ultimately would improve overall response times and quality of care across the board (2016). Participant 9, a paramedic for ER24, agreed, citing the unified call center that he worked under while in the Western Cape:

> We had that in Cape Town, where we had one of [ER24's] dispatchers in the [government] dispatch room. So when there was a call from a medical aid patient, we would get it from them and we could send our ambulance out. If they use just one control center, that'll work for when the government is running most of the calls in one place. Then you can have one emergency number. – Participant 9, 2016

Interestingly, Participant 6 also cited the Western Cape system when asked about the unified call center proposal, saying, "That's what we do in the Western Cape, we've got [private representatives] in the call center, and that's how we work. [The government and private services] piggyback off one another and it works" (2016).

However, not everyone believed that these proposals would be effective. Participant 5 claimed that it would work in an ideal world, but:

> That will be tied down, mark my words. I mean, if that happens it'll affect everyone's bottom line, including Netcare and ER24. They'll never let it go through, never. That bit of legislation will be

> tied up in court for years… And I don't think we'll be seeing [NHI] in more than a pilot phase any time in the near future, certainly not in the next five years. –Participant 5, 2016

Perhaps most harshly, Participant 1 agreed, citing corruption and the political system as major roadblocks before even thinking about NHI, saying, "We're a third world country. It's going to take a very long time. I think once the government is sorted out then we can take a look at NHI. I mean, in terms of getting a new President. Then maybe we can get back to the NHI part" (2016).

Analysis

The data gathered is merely the opinions and experiences of twenty-three individuals, each with their particular backgrounds and biases. Any conclusions drawn from this data may have been influenced by the limitations listed earlier. With that being said, there are several different themes and issues observed in the interviews and survey responses that should be explored.

The State of Durban Emergency Medical Services

A Substantial Gap Between Policy and Practice

Participants universally described a public emergency medical system that diverged significantly from the stated government policy, providing an inferior level of care to what official standards require, particularly regarding ambulance response times. This description was consistent with the literature. For example, in the literature, Durban paramedics reported frequently reaching the scene well after the patient's family got frustrated and took them to the hospital via other means. Survey respondents described the same story, albeit from the perspective of the patient; they often reported that the last time they called an ambulance it never came, or that they had to get a neighbor to take them because the ambulance was taking too long (Wick and Hlongwane, 2013, n.p.). This reality is a far cry from the fifteen-minute national standard for ambulance response times in urban areas (SAHRC, 2015, p. 27).

When asked about private ambulance services, participants again described a reality that contrasted heavily with stated government policy and regulation; while the national government has passed regulations in order to ensure that all private ambulance services uphold a certain standard of care, this very clearly is not the case in practice. Even Participant 2, who owns his own small ambulance company and passionately defended their place in the health care system, admitted that if the government were to enforce the stated regulation immediately, many, if not all, of these small companies would be shut down (2016). It also seems that this practically unregulated system serves as a detriment to patient care and puts patients' lives at risk at least some of the time. This statement is particularly true in light of the low-quality and outright dangerous care that many interviewees reported was delivered by these small companies, especially involving traffic accidents.

Urban Areas Versus Townships

One worrying development concerning the distribution of government care that became apparent throughout the study is the extent to which participants felt that EMRS is worse in the townships than in Durban itself. Although the city-versus-township divide was not well fleshed out in the literature, participants almost unanimously agreed upon it; most EMS professionals interviewed described much longer wait times in townships than in Durban itself, and some Cato Manor residents even told of ambulances not arriving at all. This divide is of particular concern because townships like Cato Manor are generally characterized by lower-income residents and thus have fewer people with medical aid than wealthier areas do, not to mention fewer individuals with access to personal transportation that can bring them directly to the hospital (Sekhampu, 2013, p. 147). As Participant 2 said, "those people who stay in [the city] have transport! They have vehicles; they have relatives. Those people in the township really need the ambulances, because they've got no transport" (2016). That is, in the situation described by participants, the people who need EMRS the most are also the ones who are most neglected.

Although the extent to which practice deviated from policy in the public sector clearly impairs the health of those in township communities in the form of low-quality EMRS care, it is difficult so say how these communities are affected by the same gap in regulating the private sector. Participant 2 argued that the lack of regulation, in fact, helps townships, saying that smaller companies like his, which are only allowed to exist due to the lack of regulation, are critical in serving the neglected and poorer areas around Durban (2016). However, this was hardly a consensus opinion, as other participants disagreed and said that smaller private services are generally even less likely to serve townships than the more legitimate larger companies (Participant 1, 2016; Participant 5, 2016; Participant 6, 2016). In addition, the survey of Cato Manor, intended to gather further evidence to explore Participant 2's claim, did not find evidence of community members using smaller services. Instead, it found quite the opposite: when survey respondents needed an ambulance, those without medical aid would generally call EMRS and the few with medical aid would call the large private services. This absence of evidence does not mean that Participant 2 is lying in his claims. However, it does mean that his claims are perhaps somewhat exaggerated; while his

company may serve a low-income township community, some townships are still served primarily by the government and the larger services, and some small companies seem to mostly make their money off already-oversaturated traffic accidents rather than serving communities. Thus, the lack of regulation may not help Cato Manor and possibly other township communities as much as he believes.

A Combination of Common and Unique Challenges

To some extent, the lackluster public system described is just a harsh reality of life in a country with a stagnant economy and a world with limited resources. After all, as both the literature and several participants identified, the long response times are fundamentally due to a shortage of resources within EMRS and a lack of immediate funds to supply more resources. This aspect calls to mind a story about Elliott Richardson, a former United States Secretary of Health, Education, and Welfare, who in 1972 discovered that his new nutrition program would only reach 5% of eligible citizens. When he asked how much it would cost to expand all his department's programs to reach everyone eligible, the answer came back as $250 billion—more than the budget of the entire federal government at the time. Reflecting on this episode, he concluded that all too often government programs "merely publicize a need without creating either the means or the resources for meeting it," a quote that also rings true in the context of all the complaints that citizens have about EMRS (Fesler and Kettl, 1991, p. 372).

It is also worth mentioning the particular difficulties of establishing a robust public emergency medical system in South Africa, and even more specifically within KZN. Participant 5, when reflecting on the system, said, "When the apartheid government was only catering to white people, there was a very efficient state ambulance service. All the best staff worked there; they had all the resources. And now, because they have to cater to the whole population, obviously there's a massive gap" (2016). That is, while the apartheid government could devote almost all of its EMS resources to catering for a tiny subset of the population, apartheid's end in 1994 meant immediately expanding the government's scope of care exponentially to include the entire population. This adjustment has potential to be particularly challenging in KZN, which is the second largest province population-wise and has "lots of areas which are extremely remote… where ambulances have to do primary

emergency calls that are in excess of 250 kilometers" (Statistics South Africa, 2016, p. 2; Participant 5, 2016). Given this context and the recency of apartheid's end, the poor modern care described by all the participants becomes slightly more understandable, though such an understanding, of course, does not diminish the unacceptable realities.

The Hybrid Governance Model

Durban Emergency Medical Services as Hybrid Governance

The coexistent relationship described by participants between the public sector and private ambulance companies is not unique to South Africa but instead fits well into the already-existing theoretical framework on public policy and non-state forces, particularly within Sub-Saharan Africa. For example, one common definition of the state is "an organization that can provide public goods—goods in which one additional recipient of the good does not reduce the availability of the good" (Kalow, 2015, p. 11). EMS certainly falls under this definition of public goods, and thus would traditionally be the domain of the state. However, as Kalow writes, in the context of post-colonial Africa, where the formal government is not always able to adequately provide public goods, non-government actors have increasingly been critical in providing these services. This dynamic forms what is often referred to as hybrid governance (Kalow, 2015, p. 18). While most of the literature on the issue focuses on the efforts of nonprofit organizations, this can apply to for-profit groups such as private ambulance companies as well. This background also gives a theoretical basis to explain the rise in these private companies: because EMRS is unable to provide the public good of emergency care at a universally acceptable level, the private services have stepped in to fill this gap in the market. Indeed, as Participant 6, who works for ER24, wryly noted, "If the Minister of Health bettered his service, our service would go out of business" (2016). In other words, the private services solely exist because the formal state lacks the ability to improve public sector EMS.

Challenges of Hybrid Governance

Literature and past research on these interactions between government and third party actors also account for some of the difficulties that participants described with private EMS

in Durban. As Fesler and Kettl wrote of the government working together with NGOs and the private sector:

> The fundamental problem is that different organizations have different purposes, and people who work for them naturally pursue different goals. Whenever the government relies on a proxy to produce a service, it faces the task of trying to impose its aims on the very different objectives of the proxy. The least that can result from such a process is conflict; the most, a deflection of the government's goals towards those of its proxy (Fesler and Kettl, 1991, 376).

Others in the field of policy implementation agree. Lester Salamon writes, "When principals and agents lack a shared set of values or worldviews, the task of ensuring that the principal's objectives are being served grows more complex and more problematic" (2000, p. 1661). While these were written about the United States, similar issues have been found to exist within an African context (Mburu, 1989, p. 597).

In summation, because the formal South African government is relying partially on private agents to provide the public good of EMS, it must contend with the private sector's ultimate objective of making money. These issues are especially prominent in the case of South African EMS because, as Salamon predicted, sometimes this monetary objective in fact directly conflicts with the government objective of providing emergency medical care for all. For example, when a patient without medical aid calls a private service, following the government's goals would dictate that they should be treated no differently, but because the patient offers little financial incentive to the private company, ambulances for non-medical aid patients often arrive slower, if they arrive at all. And when there is a car accident with many victims and thus many potential RAF payouts, following the government's goals would dictate that different private services should work together and give everyone high-quality care, but because an accident site is financially lucrative for private services, accident victims often receive negligent care.

Moving Forward

Improving EMRS

Devoting more resources and money to EMRS would almost certainly improve many of the issues described above. As participants argued, with more ambulances and better equipment, the government service would be able to get to emergency scenes more quickly and be able to provide a higher level of care once they reached the patient. With this

improved government service, not only would lower-income communities be better served, but this problem of regulation and conflicting objectives between public and private sectors would also lessen. However, most participants also had very little hope for this solution, and with good reason: to meet the standard of one ambulance per every 10,000 people, KZN would have to quintuple its current ambulance fleet, which seems quite unlikely to happen in the near future (Wicks and Hlongwane, 2013, n.p.). Policy literature also expressed this concern, as most analysts agree that one significant disadvantage of formal government providing services without any assistance by third parties is that it is far more expensive than contracting or allowing the third parties to operate independently (Fesler and Kettl, 1991, p. 387).

Regulation Within Reason

Whether or not the government service is able to improve its response times, a clear imperative commonly discussed by participants for improving EMS in the area is to enforce the already-existing regulations on the private services to bring their actions more in line with government objectives; that is, to reduce the number of cases of poor care delivered to car crash victims or patients without medical aid. However, after interviews, it is more difficult to determine the strictness with which these regulations should be carried out. After all, while employees of larger companies endorsed strict regulation to reign in smaller companies that they perceived to be dangerous, those who worked for those smaller companies felt quite differently. They passionately argued that regulation and threatening smaller companies was a terrible idea. In other words, every interviewee employed by the industry argued for the policy outcome that would ultimately be most advantageous for his or her employer. One possible manner of reconciling these very different perspectives is the concept that neither side is entirely correct. Perhaps while many small companies do in fact primarily make their money off road accidents and deliver dangerously low levels of care, others actually do work within their communities and provide a valuable service. If this is indeed the case, any enforcement of government regulation might be best suited to act carefully and avoid overly broad strokes. While ending practices like loading ten patients in an ambulance at a crash scene is surely desirable, shutting down a service that exists as an affordable and acceptable alternative within a township community is not.

The literature also endorses this type of discretion in enforcing regulation, claiming:

> Regulatory enforcement may actually be more successful if it promotes the concept of the 'good inspector,' the inspector who understands when forbearance rather than rigid enforcement will best enforce regulatory compliance, and who has the discretion to adjust regulatory enforcement accordingly (Fesler and Kettl, 1991, p. 1639).

In the context of South African EMS, this "good inspector" sounds much like what Participant 2 described: someone who can stand up to companies truly engaging in malicious practices, but who can "make me understand" the rules and exercise discretion with smaller services that actually are helping serve their communities (2016).

A Unified Call Center?

These regulations could exist in conjunction with the unified call center already planned by the Department of Health, in which there would only be one emergency number for all ambulance services. When a medical aid patient calls, the patient could then be co-opted into care by whichever private service was closest and best equipped to deal with the patient (Stolley, 2016, n.p.). This, in effect, would be embracing the model of hybrid governance, and not without good reason: despite the problems laid out earlier, collaboration between the private and public sectors to deliver public goods is not necessarily a bad concept, and is in fact a common phenomenon in policy implementation (Salamon, 2000, p. 1613; Meagher, 2012, p. 1073). This collaboration has many advantages, such as lowered costs for the government and increased flexibility in that private companies do not have to worry about government red tape (Fesler and Kettl, 1991, p. 388). Fortunately, in addition to the theoretical basis, there is also a practical framework for how this system could work, namely the system already in place in the Western Cape, which many participants cited as highly functional.

Of course, this does not mean that implementation of the call center, or any of these plans, will be straightforward. Some participants expressed skepticism, citing government corruption and a lack of cooperation on the part of the private sector as potential roadblocks. But, without a sudden infusion of resources into EMRS, regulating and collaborating with the private sector may be a viable way forward in working towards the goal of improving the emergency medical system.

Conclusions

The government-run EMS in Durban performs at a level far inferior to what is required by the national policy standards and the needs of the people, particularly concerning ambulance response times. Because the government is unable to provide EMS at a level acceptable to much of the population, the private sector has stepped into the gap in the market; as many as forty private ambulance companies now operate in Durban. The presence of the private companies creates a situation of hybrid governance, where the third party groups of the private sector are providing the public good of emergency services to a portion of the public. However, even within the private sector, there are issues with the level of care provided, particularly involving smaller so-called "fly-by-night" ambulance companies. This issue again highlights the disparity between policy and practice; while the government has passed strict regulations in order to uphold a minimum level of care among the private companies, participants unanimously reported that these regulations are in no way enforced.

Participants discussed many possible solutions to the fundamental problem of poor service, including devoting more money and resources to the government service, enforcing regulation of the private services, and the proposed unified call center for both private and government services. While there is some reason for optimism that these fixes could improve the service, there are also many pitfalls such as corruption and a lack of cooperation on the part of the private sector. Ultimately, until the service is improved, citizens of Durban and the surrounding area will have to live with the fear and uncertainty of not knowing what kind of care they will receive the next time they call for an ambulance, and the ANC's promise of emergency care for all communities will go unfulfilled.

Recommendations for Further Study

This study takes only a brief look at the general state of emergency medical services in Durban and could be improved or expanded upon in a number of ways.

One critical manner to improve on this research would be to broaden its sample size. Because of time constraints, I was only able to conduct nine interviews with professionals involved in EMS, and survey fourteen members of the Cato Manor community. A study involving more professionals could perhaps bring in different opinions and lend further depth to the analysis. This further research would be particularly valuable if more interviews were conducted with employees of small "fly-by-night" companies or with government employees, as I had particular difficulty accessing these groups. Of course, any study involving EMRS employees would have to adhere to SIT's Human Subjects Research Policy and take the utmost care to protect the anonymity of the subjects.

Expanding the research to include the opinions and beliefs of citizens in different townships outside of Cato Manor would also be beneficial. While the survey in Cato Manor was intended to explore Participant 2's claim that smaller ambulance companies were integral to serving the townships, the conclusions that could be drawn from this survey were limited, as that the survey was conducted within one small community of one township, rather than encompassing many neighborhoods in many townships.

Several participants suggested that I ride along with various private ambulance companies in order to observe the described issues for myself. I did not do this for practical and ethical reasons, as I am not qualified to deliver medical care and ethically could not include these observations in my study. However, this could be a potentially very useful method of gathering data for future researchers, as they could see for themselves what happens when a non-medical aid patient calls and how patients are treated at accident sites. Of course, anyone interested in pursuing this path would have to be very careful to uphold ethical standards concerning doing research in a medical setting.

Some participants mentioned the manner in which small private services often assist the government or larger private services in calls that the larger services do not think they will be able to reach. This practice did not appear to significantly affect EMRS response times and was not reported to be a major part of smaller companies' business, and thus was beyond the scope of

this study. However, the nature and extent of these interactions could potentially be a very interesting window into the EMS industry and would be an intriguing topic for a future research project.

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Participant 3. (2016, November 10th). Survey. Cato Manor citizen.

Participant 4. (2016, November 11th). Survey. Cato Manor citizen.

Participant 5. (2016, November 8th). Personal interview. Journalist with experience in EMS.

Participant 6. (2016, November 3rd). Personal interview. ER24 trauma counselor.

Participant 7. (2016, November 2nd). Personal interview. Citimed Ambulance paramedic.

Participant 8. (2016, November 8th). Personal interview. Small ambulance company paramedic.

Participant 9. (2016, November 3rd). Personal interview. ER24 paramedic.

Appendix 1: Sample Interview Guide

Introduction

1. Just to give you some context, I am an American university student spending a semester studying in Durban. As the capstone for my program, we spend four weeks on a project, basically writing a long paper on an issue that we want to learn about. My issue is emergency medical services in KwaZulu-Natal and how they can be improved.
2. What is your name, age, and occupation?
3. How long have you been doing this for?

Assessing the System

4. What are your average response times, from the moment that a person calls to the moment that you arrive?
5. How do these compare to the average response times of the government service?
    a. In Durban?
    b. In more rural parts of the country?
6. What is the biggest barrier to improving response times?
7. In your experience, to what extent are equipment issues and a shortage of resources a problem for your ambulance services? What about government ambulance services?
8. How much of an issue are smaller "fly-by-night" ambulance companies?
9. Do you think that the system you're describing is acceptable for a country only 22 years into democracy?

Policy and Improvement

10. So let's talk about how EMS can be improved… Which of these specific issues do you think the government most needs to prioritize in improving EMS? (e.g. response times, equipment issues)
11. How do you think they should go about improving this issue?
12. Are you familiar with the National Health Insurance plan and the portion of it on EMS? If so, do you think that its provisions will help substantially improve the system?
13. Do you have any hope that EMS will be improved in the coming years, or do you feel as the situation is at more of a standstill?

Conclusion

14. Is there anything else that you want to add?
15. Is there anything you want to ask me?

Appendix 2: Survey

Please circle your response to the following questions.

1. What is your age? _____ **Male / Female**
2. Do you have medical aid? **Yes / No**
3. Have you ever called an ambulance? **Yes / No**

(Please only answer questions 4 - 7 if you answered, "Yes" to question 3)

4. If you have called an ambulance, what service did you call?

5. Why did you call that ambulance service?

6. About how long did the ambulance take to get to you? _____

7. Do you think the ambulance service was good?

8. If you had an emergency today, what ambulance service would you call?

9. Why would you call that ambulance service?

11. Who do you think provides the BEST ambulance service? (please circle)

    Government Ambulance Service

    Private Ambulances (Please specify which company) _____

12. Why do you think they are they the best?

13. Who do you think provides the WORST ambulance service? (please circle)

    Government Ambulance Service

    Private Ambulances (Please specify which company) _____

14. Why do you think they are they the worst?

Appendix 3: Ethical Clearance Form

SIT Study Abroad
School for International Training

Human Subjects Review
LRB/IRB ACTION FORM

Name of Student: Jack Boyske ISP Title: An Exploration of Emergency Medical Service in KwaZulu-Natal Date Submitted: 31 October 2016 Program: Durban Community Health and Social Policy- Fall 2016 Type of review: Exempt ☐ Expedited ☑ Full ☐	Institution: World Learning Inc. IRB organization number: IORG0004408 IRB registration number: IRB00005219 Expires: 9 December 2017 LRB members (print names): John McGladdery Clive Bruzas(PhD) Francis O'Brian(PhD) **LRB REVIEW BOARD ACTION:** __✓__ Approved as submitted ____ Approved pending changes ____ Requires full IRB review in Vermont ____ Disapproved LRB Chair Signature: Date: 31 October 2016

Form below for IRB Vermont use only:

Research requiring full IRB review. ACTION TAKEN:

__ approved as submitted __ approved pending submission or revisions__ disapproved

IRB Chairperson's Signature Date 31 October 2016

Appendix 4: Consent to Use Form

SIT Study Abroad
School for International Training

Access, Use, and Publication of ISP/FSP

Student Name: Jack Buyske

Email Address: john.buyske@pomona.edu

Title of ISP/FSP: Traditional ISP

Program and Term/Year: Community Health and Social Policy, Fall 2016

Student research (Independent Study Project, Field Study Project) is a product of field work and as such students have an obligation to assess both the positive and negative consequences of their field study. Ethical field work, as stipulated in the SIT Policy on Ethics, results in products that are shared with local and academic communities; therefore copies of ISP/FSPs are returned to the sponsoring institutions and the host communities, at the discretion of the institution(s) and/or community involved.
By signing this form, I certify my understanding that:

1. I retain ALL ownership rights of my ISP/FSP project and that I retain the right to use all, or part, of my project in future works.
2. World Learning/SIT Study Abroad may publish the ISP/FSP in the SIT Digital Collections, housed on World Learning's public website.
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Jack Buyske 11/22/16

Student Signature Date