Elective Grant Report

Just following my last shift at Khayelitsha Hospital - our team celebrated the end of a run of days/nights off by going up to the roof to get some fresh air and rain on our faces

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From the 7th of May to the 1st of June 2018, I was lucky enough to undertake an elective in Emergency Medicine and Trauma, at Khayelitsha District Hospital (KDH) located in the Khayelitsha Township on the outskirts of Cape Town, South Africa.

It feels slightly surreal thinking back on this placement. I remember landing in South Africa, full of excitement and nerves, and brimming with anticipation for the unknown. Coming back to Adelaide felt like waking up from a dream – I remember all these strange, unbelievable events, and it's hard to believe I was allowed to do half of what became day-to-day procedures in Cape Town. Hospital medicine is intimidating enough in Australia, let alone in an extremely violent township where the cultural barriers compound on pre-existing barriers of not being fully trained in our profession. I don't think I went into this with any kind of delusion about what kind of situation I was signing up for, but the actual experience and outcomes were beyond anything I expected.

I was lucky enough to work under the highly respected and highly esteemed Dr Sa'ad Lahri, a consultant Emergency Physician and Head of Emergency Services at KDH, and a legend in his own right amongst the ED scene of Cape Town. He is passionate about teaching, and used every ward round as an opportunity to test and educate us on medical conditions that we had come across, as well as providing a master class in efficiently building rapport with very sick patients.

The local doctors leading the team were incredible – so capable and skilled. All at different levels, it was amazing to see the quality of medical training in South Africa and compare notes on medical schools and specialist training programs across the world. We also had the bonus of having several international doctors from Sweden who were game enough to come over to South Africa for some intensive ED training. They were in the emergency medicine training courses back home, but like us they had come to KDH for training in situations that they were unlikely to see in their own country. I also had the benefit of working with two British medical students who had been there for 2 weeks when I joined the team. They took me under their wings and guided me through the first days, and it made an insurmountable difference to have them there to commute with and debrief with after crazy shifts! Lastly, there were several very competent nurses and radiologists who were always happy to share clinical gems if they thought you were interested, which helped immensely initially while I was finding my feet.

I have always loved Africa, and when I was 15 my parents took my sister and I on a trip around South Africa, Botswana, Kenya, Tanzania, Namibia and Zimbabwe. We travelled with a local guide, who introduced us to a tribe of Maasai Mara (one of the indigenous ethnic groups of Africa). This experience opened my eyes to how people around the world could have such a completely different way of life from my own, and planted the seeds of a desire to ensure that everyone has equal access to basic human resources, such as medical care. It was incredibly fulfilling to be able to return a decade later, and use the knowledge and skills I have spent so many years studying to give something back to people with such a rich yet harrowing history.

One of my favourite aspects of this rotation was the outstanding hands-on practical experience.

Besides the unique clinical experience of treating a population with a huge proportion of tuberculosis and HIV (and the diagnostic challenge that presents – for instance a headache is never just a headache unless you've definitively ruled out meningitis), the reality of working in a self-proclaimed "trauma mecca" meant that I had an unfathomable amount of opportunities to practice suturing, closed fracture reductions, and insertion of chest drains.

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Assessment of a gunshot patient

The ever-busy nurses station in between trolleys, the paediatric Emergency Department, the asthma/respiratory room, and resus

Khayelitsha and surrounding townships on the drive to and from work. It was both incredibly humbling and emotionally devastating to think that so many hundreds of thousands of people live their whole lives in these structures.

Things I witnessed

3 to 4 bullet/gunshot wounds (including one from last year where the bullet was still lodged in the patient's skull). This also included a bullet wound to a patient's thigh, causing shattered/comminuted fracture of femur, and one that went to upper thigh and grazed penile shaft

A lateral canthotomy on a patient with intracranial bleeding and increasing ICP

Paediatric CPR on a 12 month old

Awake intubation (in severe COPD patient).

Procedures I performed

2 x chest drains (1 observed/assisted, 1 solo)

6 x lumbar punctures

Suturing various lacerations (sharp and blunt force trauma)
- 15 x Arm
- 4 x Hand
- 3 x Facial, including 1 x paediatric (eyebrow laceration in 5 year old female)
- 5 x Scalp (including assessment of depressed skull fractures – felt 2-3)
- 1 x Lip
- 2-3 x Penetrating chest wounds (stabbings)

Venepuncture/IV insertion into multiple HIV positive patients and on paediatric patients

Multiple episodes of CPR/ALS

Assisted in multiple caesarean sections when there were no other surgeons available.

Though medicine is a universal language, working in a hospital in Africa is vastly different from Australia, and one of the realities of working in an under-resourced setting is the inevitable equipment shortages. In retrospect, it was amazing the things we ran out of – 10ml syringes, n95 masks, size 8 sterile gloves, even beds and chairs! But did these shortages have a detrimental effect on the care provided to the patients? No.

The Khayelitsha doctors and nurses were used to these inconveniences, and adapted effortlessly to using whatever resources were available. Though I was initially taken aback by these shortages, I was soon able to follow the example set by the rest of the team, and take such inconveniences in my stride. By the last few weeks, myself and several of the junior doctors had taken it upon ourselves to start our shifts by going to different store rooms around the hospital to obtain various basic equipment for venepuncture, IV cannulation, and basic procedures, as very few nurses had the experience or knowledge to anticipate what we might need.

Another difference is the high patient load – fewer doctors and nurses available each shift meant each staff member was managing higher numbers of patients, a situation which worsened every time an active resus came in and required more skilled hands to manage.

This experience has made me realise how lucky we are to have the resources we do in Australia, and grateful that we have such highly skilled and trained nurses and allied health professionals working with us to provide high-quality patient care.

Though the outside environment wasn't exactly safe (the weekend after the monthly payday was described to me by several people as a "warzone"), inside the hospital was a different story. I never felt unsafe in the ED. Though there were plenty of security guards around to help in occasional cases, for the majority of the time they weren't needed. Patients in Khayelitsha were generally there for quite significant issues, and so were grateful for any care we could provide, even despite our limited vocabulary and thus stinted communication skills. There were a few hairy situations on our daily transit; several times there were riots in the townships, and there were people burning tyres on the main freeway between KDH and Cape Town, so we had to divert through other townships at night to get home, but most of the people we interacted with in person were polite and reasonably welcoming.

That being said, exploring Cape Town and the surrounding areas was absolutely wonderful. It is such a beautiful place, between all the beaches and the wineries and Table Mountain, you sometimes forgot you were in Africa, and could have been forgiven for thinking you were back in Australia or Europe somewhere. I had some especially notable field trips with other students to various wineries, surfing at the local beaches, seeing penguins in a nature reserve, hiking up various mountain peaks, interacting with cheetah cubs, and diving with great white sharks – experiences I will never forget.

I had several aims going into this elective, both personal and professional. Personally, I aimed to improve my skills in procedural interventions for patients with trauma, gain a greater understanding of providing healthcare to a population with a culture so different to my own (which is an essential skill in the ever-growing diversity of the Australian population), and learn about the indigenous Xhosa culture and how to better overcome social and communicative barriers socially, as well as in the medical workplace.

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New beds purchased for the emergency unit

Patients were previously laying on the floor but new beds mean they will no longer have to

New portable vital observation machines

The new ultrasound machine can be used to diagnose patients quickly and non-invasively

Professionally, I aimed to improve my ability to work in team (especially in high-stress situations), learn the necessary procedures to manage various trauma situations, better my clinical knowledge with regard to disease in developing countries/reduced socioeconomic populations, and build up the necessary resilience needed as a junior doctor for my intern year ahead.

I would like to think I am a better doctor now after that experience as a student – I am more understanding and willing to learn about patients from culturally diverse backgrounds, and I think I handle stressful situations much better.

I know my practical skills have improved exponentially from what they were beforehand, and I feel very comfortable performing many basic procedures that I might face in the ED here. I think this experience has taught me patience, to be grateful for all the resources and opportunities we have here in Australia, and that sometimes the best thing to keep you going in a long, difficult shift is giving yourself permission to take a time out and lay down for a few minutes and just breathe.

Going into this placement, I was not a naïve first year medical student with plans to go to a developing country's hospital and single-handedly fix the healthcare system, or provide some kind of miracle service. South Africa has an insanely complex and nuanced history of colonialism, apartheid, and uprising which deeply impacts the function of its society today. This is exacerbated today by the insurmountable gap between rich and poor, the living conditions and daily acceptance of violence in the townships, the current drought situation, and certain politicians advocating for seizing land from white farmers without compensation, stirring up racially-based tension and hostilities. I know that my time in Cape Town did not make any kind of real difference to the people who suffer as a result of this, but I believe my ability to do some of the more elementary but time-consuming jobs (like hands-on procedural interventions, helping see patients in triage, or writing notes and summaries) took some pressure off the resident South African doctors in my team, which allowed them to focus on managing patients with multiple complex issues requiring more experience to diagnose or treat.

I'm so grateful for the time spent with the Xhosa people, getting to know their way of life, taking part in their happiness and in their sorrows. Though I wasn't able to make any large-scale changes, hopefully I was able to make a small difference in the lives of a few individuals by providing safe, hygienic medical care to them in their time of illness or injury (and for a memorable few, sewing them back together neatly for the best aesthetic outcome).

A major issue I noticed when I was working on the floor was lack of beds in the ED trolleys area, and in the paediatric ED area. The KDH was built in 2012 to service the Khayelitsha Township and the surrounding areas. It was built to cater to a population of 400,000 people, but it is widely thought that the population of Khayelitsha is closer to 2 million. Due to this increased population and chronic underfunding, KDH is constantly inundated with more patients than it has the beds to accommodate (though in my time there, I never saw a single patient turned away, even if it meant that patients had to sit in chairs or wheelchairs while being treated by the doctors).

The hospital is in the process of converting agency posts to permanent posts, commissioning 30 extra surgical beds, and planning a psychiatric unit for observation and a CT scanner service for better diagnostic capability, so I have nominated that the $1,500 community component of the MIGA Grant will go towards providing these resources.

Final thoughts

This experience has shown me an invaluable lessen about being a medical student – we cannot hope to match the knowledge, or experience, or clinical acumen of the doctors who've worked in these fields for years, but the one thing we do have that they don't usually have is time. Time to suture, time to insert jelcos and start a line, time to do an ECG or order radiology on a patient, time to walk a patient down to their x-ray because the porters aren't around. From this realisation grew a symbiotic exchange – the students learnt to perform the doctors' busywork (including the fun procedural stuff) to give them time to see more patients, and in exchange we were provided with an unreal amount of learning opportunities and bedside teaching from some of the most incredible emergency medicine doctors in the business.

Having completed an unbelievable, almost surreal placement in a true developing world area and so-called "trauma mecca", I have learnt several important lessons that will stick with me forever:

Trauma is beautifully simple

After seeing an almost incomprehensible amount of major trauma in Cape Town, I've learned that there are only a handful of immediately life-threatening pathologies in blunt or penetrating trauma, and though there are limited interventions we can perform in ED, these can be life-saving if provided appropriately and in a timely fashion.

We are so lucky that stuff doesn't run out in the developed world

As I mentioned earlier, the sorts of things we ran out of in Khayelitsha were some of the most commonly used equipment in day-to-day medicine – things that would be inconceivable to run out of in a developed country's hospital. I hope this dose of perspective will hold me back from unnecessary griping in future shifts.

HIV and Tuberculosis (TB) must be considered in EVERY patient

Khayelitsha has the highest HIV prevalence in the Western Cape Province, and the disease burden for TB is equally high. These diseases dominate the differential diagnoses for every sick medical patient, and required a complete overhaul to my history taking and investigations to ensure I didn't miss anything crucial.

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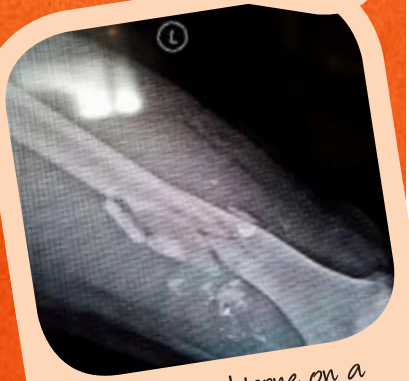
Our usual ambulance entrance to the Emergency Department at the back of Khayelitsha Hospital

Morning handover with Team 3 in the trolleys area

Me and my fellow team members



A shattered bone on a patient's x-ray

Personal protective equipment is serious business
I had the foresight to bring a months' supply of n95 masks with me to South Africa, but bringing them with me and wearing them for the entirety of a 13 hour shift is a completely different matter!

The best learning environment is the shop floor
Especially when faced with the wide-ranging illness and extreme physiology that is par for the course in a South African ED.

How to prioritise in resus
In KDH, we could get an ECG, a blood gas, a portable x-ray and a basic bedside ultrasound in resus. Bloods could take up to 6 hours to come back, and there was no CT scanner or trauma surgeon. Our goal was to resuscitate, stabilise and transfer the appropriate patients to a larger tertiary centre. Did this lack of resources make much of a difference to patient outcomes in that situation? Probably not. But it did show just how much can be achieved with just the bare minimum of resources.

The real meaning of 'busy shift'
Prior to going to South Africa, my definition of a busy shift was when I had to stay the entire time of a shift, and was actively working up or treating patients for most of that time. Needless to say, working a weekend night shift in an insanely busy South African ED has changed that perspective dramatically!

The team you work with is everything
Seeing the same faces day in and day out allowed everybody to work together and maximise each person's respective skills, and toiling away over trauma for hours on end forged a unique camaraderie and bonds that I will never forget. I cannot imagine how much more physically exhausting and emotionally draining this month would have been without those friendships, debriefing opportunities and occasional hysterical giggles over nothing in the tea room.

There is no excuse for inadequate care
Growing accustomed to death was one of the steepest learning curves in South Africa. Many of our patients were in such bad shape by the time they made it to the hospital that there was only so much we could do for them with the limited resources we had. But that never stopped any of the doctors from aspiring to give the best possible care to every patient. By accepting these facts, doctors were able to act without being dragged down by feelings of hopelessness or futility; because we genuinely were doing our best, there was no feelings of indifference or putting blame on the system. This attitude helped me survive the constant onslaught of horrific violence and heart-wrenchingly wasteful deaths, and I hope I can bring some of this positive strength and resilience back to my work in Australia.

And finally
The core beliefs told to me by Dr Lahri on our first morning in the hospital: "Be humble… and don't be an asshole."