



## **South Africa Medical Elective Report**

16<sup>th</sup> March – 24<sup>th</sup> April 2015

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## **Elective proposal**

*I have been offered a placement in the Emergency Department of Groote Schuur Hospital, Cape Town, South Africa. I chose to apply there as I am interested in pursuing Emergency Medicine as a future Career, particularly children's ED. After carrying out research online I found South Africa to have some of the most exciting EM opportunities in the world owing to the high rate of trauma. Groote Schuur Hospital appeals to me due to the prestige of it being known for where the world's first heart transplant took place.*

*I am hoping to spend the time practicing taking histories in the equivalent of an A&E or AMU-type setting and following up patients through their journey to gain an understanding of the management of acutely ill and trauma patients.*

### **Proposed Learning Outcomes of the Elective:**

1. Enhance history taking skills in the setting of Emergency Medicine through clerking patients
2. Develop theoretical knowledge of a wide range of practical skills in Emergency Medicine by direct observation and shadowing
3. Join Clinical Training rotation of UCT students to include bedside teaching and seminars
4. Attend ward rounds
5. Improve skills in physical patient examination of all systems
6. Understand the specific challenges of medicine in a sub-Saharan country with different Infectious Disease considerations

## Elective report

### *Thoughts before departure*

I undertook the elective with two friends, heading to the same A&E department at Groote Schuur. Between us we were confident we had covered most of the general medical and surgical specialties and thought that, although we'd had little experience of emergency medicine, we at least knew we'd have one another close-by for advice and help. Before we left I was nervous about what we might be asked to do, whether we would be given too much or too little responsibility and if we would ever be able to negotiate a foreign department. As we are not required to learn any management for IPEs, I imagined I would feel naïve about making any management decisions, theoretical or otherwise. I had heard a lot about 'all the gun shots and stab wounds' we were going to see, although these were more likely to be in the trauma department next door. I have never been squeamish and have encountered death on the wards before now, but was unsure what to expect from a busy department in a developing country.

### *Observatory, Cape Town*

During our six-week elective we stayed in the Cape Town suburb of Observatory, historically renowned for being a 'grey area' during Apartheid by refusing to accept black/white segregation. Green Elephant Backpackers is a hostel 200m from the front doors of Groote Schuur Hospital which often hosts medical elective students. It was comfortable and welcoming with a busy travelling scene and lots of medics and non-medics to mix with.

On the drive from the airport we passed one of the largest informal settlements in Cape Town. I had heard about townships before we arrived but did not expect such a stark contrast between the scenery inside and outside the settlement fences. Rolling mountains and whitewashed houses turned into slum-type corrugated iron constructions piled one upon another within a matter of metres. Invariably the patients we were to see and treat in hospital came from poor villages or these townships. The main languages spoken in Cape Town are English and Afrikaans, with the majority of people from informal settlements speaking primarily Afrikaans. All of the hostels we saw offered trips to the townships for a braai (barbeque) and to see the living conditions, but it felt exploitative and I did not feel comfortable with the tourist aspect. The first thing we had to negotiate was learning which areas were safe to walk in unaccompanied; something we thankfully don't have to consider as carefully in Britain. We quickly became used to the route to the shops and restaurants and learnt which places to avoid.



We visited the University of Cape Town (UCT) to collect hospital badges. A large, beautiful campus-based University: it did not feel unlike European Universities. We witnessed three days of the Rhodes Must Fall protest by UCT students campaigning for the removal of the statue of Cecil Rhodes. One of the founding members of UCT and still a major beneficiary to the student fund, Englishman Rhodes was

also a supporter of racial segregation. The removal of his statue in April made world news. See: *Rhodes statue removed in Cape Town as crowd celebrates. BBC World News. Africa. 9 April 2015.*



[Left] A student protest on UCT campus. The statue of Cecil Rhodes is taped up with dustbin liners. Students march towards stationary traffic with banners baring the slogan 'Rhodes Must Fall'. [Right] Getting into the student life: A varsity rugby match at UTC.

### *Groote Schuur ("Great Barn") Hospital*

Groote Schuur, set in front of Devil's Peak mountain, is a large tertiary public hospital responsible for the clinical training of the University of Cape Town's medical cohort. The immediate contrasts between it and a UK hospital are the security scanners at the front door and security guards on the doors to the wards.

Arriving at the Emergency Department was daunting, as our experience of emergency medicine stretched to a few days in A&E during our Junior Surgery rotation. The department consisted of a six-bed resus station, a room for Majors and at the end of the ward, six psychiatric beds. Down the corridor was a large holding bay and a Minors section where four patients could be attended to at any one time. Patients with active TB were quarantined into a side room though there was no separate ventilation. The Majors suite would have held four to six patients in England but at its fullest here I counted 16 beds side by side around the walls. In order to approach a patient's bedside we would often have to shift beds like dominoes. The patients had no privacy. Our first impression was that the pressure was going to be high!



There were also Swiss elective students booked onto the ward as well as six UCT student, so we worked out a rota which meant we could have days off to see Cape Town and make up for it by working nights and weekends.



### *The first week*

On our first ward round with our supervisor Professor Credé, we were shown how to find the triage sheets for each patient and were then left to begin clerking patients. With one doctor to seven or eight patients, there wasn't much time for introductions.

The first patient I saw was breathless and in need of symptomatic relief. This was the first time I had been the first person to review a patient who needed acute medical attention and is what I had been most nervous of. We had to wait for a senior doctor to become available in order to present our management plan, then were charged with organising an x-ray and carrying out an ECG. Having not performed an ECG since TDOCS it was a relatively new experience but a helpful nurse was on hand to talk us through it. Once the results of all the tests came back we were able to review them and develop our plan further. The reason for her breathlessness was her stage five renal disease. Having completed a renal placement in the UK my immediate thoughts were of dialysis or alternative renal replacement therapy. Shockingly, because the lady was over 60 she was automatically excluded from any long-term treatment for her poor kidney function. It was only the first patient and already the effects of the tight budget were showing themselves and the reality of what it meant for our patient was dawning.

In the afternoon I saw another patient with breathlessness but this time the reason was reversible airway obstruction. On the wards in England, medical students review only patients who are stable with a diagnosis and management plan. Our portfolios allow us to explore differential diagnoses based on their initial symptoms, but until I'd clerked two breathless patients in one day with different aetiologies I hadn't fully appreciated the importance of some key questions in my history taking. I knew for the first time that the management plan we made would depend on the suspected cause of the symptom and it made me acutely aware of my history technique. I realised that I need to improve my ability to make a working diagnosis rather than going through the motions of a set history proforma. I am looking forward to expanding this skill in my acute block this year and through my F1 Assistantship, which I start this week. I fully believe my experience in Cape Town will make a real difference to the success of the Assistantship.

I examined a patient in Resus who was in the end stages of disseminated tuberculosis and metastatic cancer. The hard lymph nodes in his neck were an almost perfect anatomical depiction of the anterior and posterior cervical chains and his x-ray showed all of the classical TB changes. Unfortunately this wasn't an unusual presentation over the course of the six weeks, although I would imagine it is rarely seen in the UK. He passed away before the end of the day with nobody beside him and none of the end



of life medications we use in England, where he would have had one-to-one nursing or at least some privacy. I found it very hard that first day to accept this.

Every time a test was ordered on the ward, the price was written adjacent to it. Tests regarded as routine in England, such as CRP would be rejected from the lab automatically due to cost, unless signed off by a consultant. We were assessing a patient one day with a new murmur one day which I suspected to be aortic stenosis and which required an echocardiogram to investigate. After I presented my findings to the Registrar, he quizzed me about the clinical features of various murmurs. On the basis of a normal pulse pressure and absence of a slow-rising pulse, he ruled out aortic stenosis. This highlighted how heavily dependant we have become on test results in Western medicine – the art of the clinical diagnosis is being lost and it's a shame. I have since purchased a copy of McCleod's Clinical Examination to improve my clinical acumen and have resolved not to order batteries of standard tests unnecessarily!

A girl my age was wheeled past on a stretcher unconscious with her distraught sister who had found her. There are 100 reasons why she might have been unconscious but the Registrar took one look at her ECG and diagnosed an overdose of tricyclic antidepressants, despite her sister being adamant she had not had access to any. After she was brought around, she admitted to taking an overdose. I don't remember being so impressed by a clinical decision before.

*"On pay day the trauma ward runs with blood."*

#### *Weeks two to six*

One of the best ways to experience a variety of patients at the hospital was to work different shifts; during our time we worked many evening and night shifts and Easter Bank Holiday. During the nightshifts we experienced a lot of substance induced psychosis (SIP), along with heroin overdoses and organophosphate poisoning. These times were probably what I found most challenging, due in part to not having much theoretical knowledge about medication or recreational drug overdoses and therefore not knowing how to handle them, and partly because in the UK acute and volatile psychiatric patients would not be included in general A&E. We were taught how to use the Pierce Suicide Intent scale and more than once were tasked with assessing somebody's risk of attempting suicide by overdose, which was a new experience. Some of the questions were very difficult to communicate in broken English, adding further pressure to a trying subject. I was scared the first time, but like most things you adapt quickly and I learnt that if you have confidence, the patient will have confidence in you and in turn are more likely to be honest.

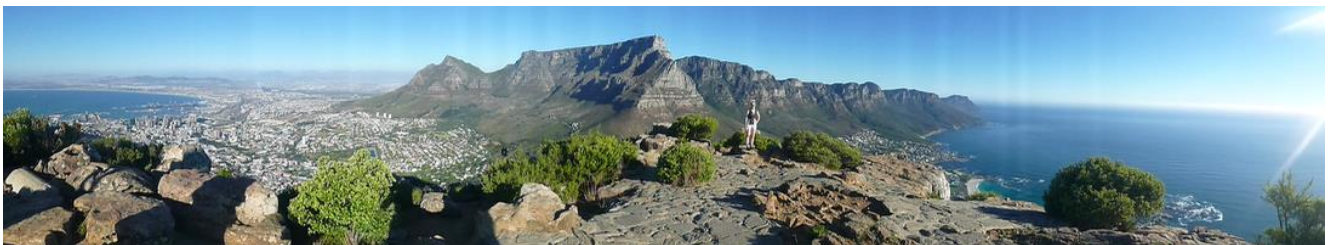


Another example of the cultural differences between South Africa and the UK: The brother of one of the ward nurses came into A&E referred by his GP with a blood pressure of 260/140. He was upset and refusing to eat. I presumed he was worrying about the state of his health aged 25 but actually he was in mourning because the job he had applied for had refused him on the back of his new hypertension. Only the fittest youngest people seemed to be able to find work.

I noticed a difference in the attitudes of patients towards their care. They didn't expect to be involved in any decisions about their diagnosis or treatment; after patients were seen, tests would be ordered and a diagnosis and treatment plan was made away from the bedside. If the patient was fit for discharge they were often sent away without explanation of their condition or what, if anything, had been done. It brought home

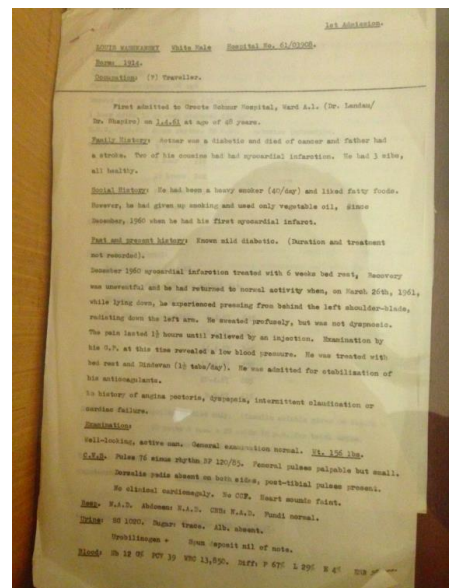
the paternalistic versus shared models of care we studied during phase one. Incorporating patient views and wishes has been so ingrained in the way we have studied it was a shock to see the absolute trust the patients had in the doctors and their indifference to know anything that wasn't crucial. I thought it must be a reflection on the increased disparity in education status and it made me feel uneasy. People had poorer expectations of both healthcare and communication, but it didn't mean we should lower our standards. One lady I clerked had all of the symptoms of hypothyroidism I could think of (some that were life threatening), because she'd decided she no longer want to take her thyroxine. I'm not sure her condition had ever been explained to her.

Some patients came referred from GPs, who are unregulated and paid for privately. This means that patients could usually get access to any medications they wanted, which is good for the patients who can afford it but is another stark portrayal of the tiered social system in South Africa. It also means that they come to A&E addicted to medications like benzodiazepine but have run out of money and have to suffer the effects of abrupt withdrawal, or with all the side effects of polypharmacy. One young girl presented with acute oromandibular dystonia from a haloperidol overdose, something which is only read about in psychiatry textbooks in England.



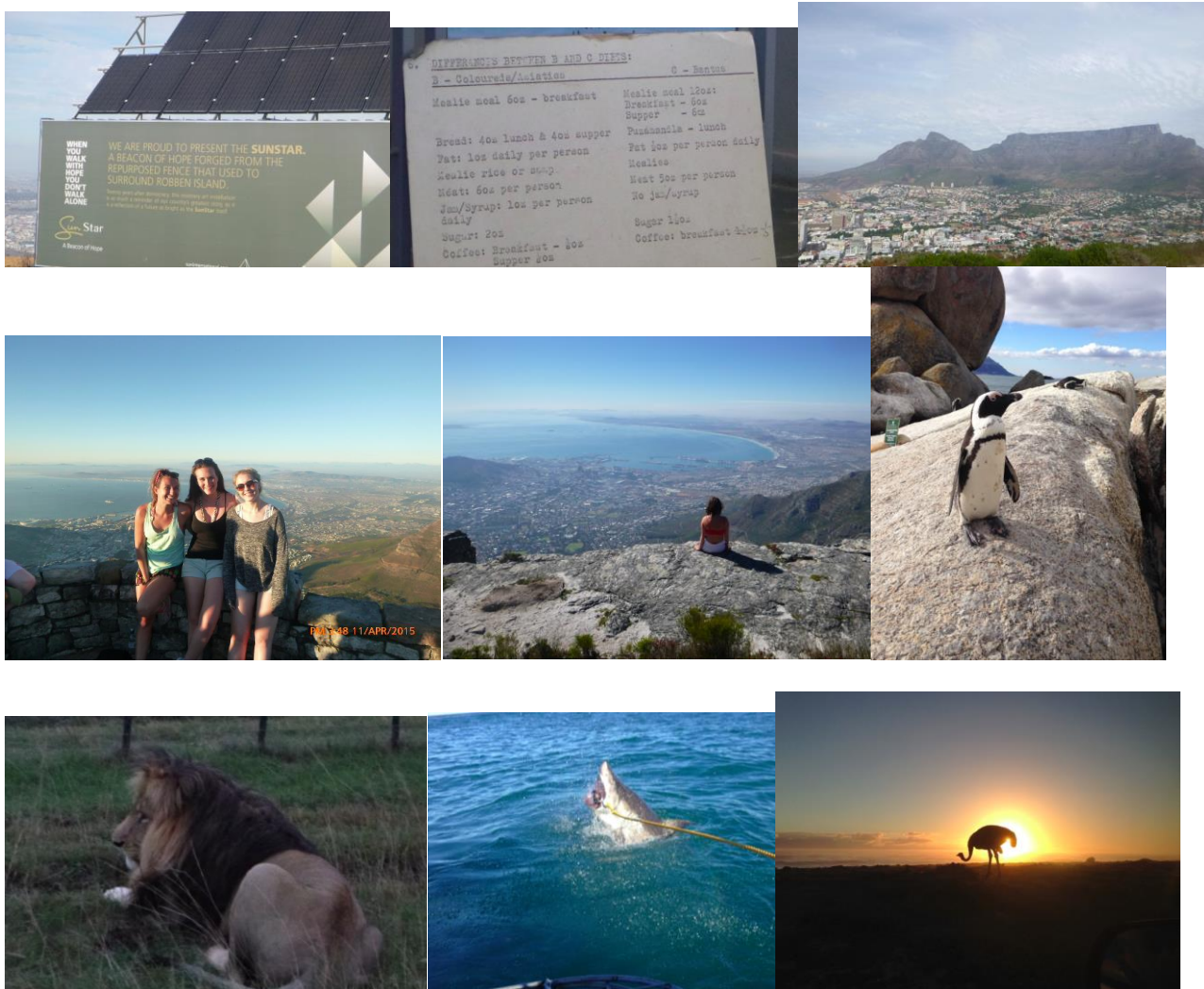
### *The Mother City*

As Groote Schuur is renowned for being the site of the world's first successful heart transplant, I was excited to take a tour of the transplant museum, which we did in our final week. The two-hour museum tour happens in the old theatre suites where the operation took place. There are Madame Tussauds waxwork figurines set out to recreate the theatre scenes, including Christiaan Barnard as the lead surgeon disconnecting the beating donor heart and his brother in the adjacent theatre waiting to receive the heart into the open chest cavity of the recipient. Incidentally, the fatal road traffic accident which killed the young donor girl occurred on Main Road, just outside the door of our hostel.



[Pictures] The donor heart from the first heart transplant. A reconstruction of the first transplant operation. Clerking notes from the admission of the first heart recipient.

We hired a car to explore Cape Town and the local area as there is so much to see and do. We particularly enjoyed travelling to Rhodes Island to visit Nelson Mandela’s prison cell, travelling to Cape Point, the most South-Easterly point of Africa and making the most of the wildlife!



### *Review of learning objectives*

The main reason I chose South Africa was for the exposure to emergency medicine and trauma I haven't yet had in England, in the setting of a tertiary centre with responsibility for teaching its own medical students. I chose not to undertake a research project because I am building an academic portfolio in the UK and chose instead to focus on clinical medicine. What I found was fast-paced third world medicine in the setting of a beautiful but complex country. Through cultural differences and language barriers I was challenged, but each day became easier and I felt I adapted quickly. My confidence in patient approach has grown enormously, as well as an awareness of my own competencies and more importantly, my limitations.

In terms of my proposed learning outcomes, I spent six weeks clerking patients with all manner of medical concerns in a busy and pressured environment and I am pleased with the advancement in my history taking skills. I observed a range of procedural skills such as chest drains, lumbar punctures, pleural taps, arterial line insertions and femoral stabs, all carried out by skilled doctors who were keen to explain each step. This gave me time and encouragement to refresh my anatomy. I found that my special study module in Clinical Anatomy of Practical Procedures came in very useful.



We were mixed with UCT medical students on a daily basis and built a very good relationship. They enjoyed asking us about the structure of the NHS, the new reforms and about guidelines and practices in the UK. In turn they helped us to negotiate the ward and educate us on public health. We were amazed to learn that the leading cause of COPD is indoor cooking fires and also that lumbar punctures are carried out routinely to look for a secondary cause of depression.

Being given the responsibility of clerking sick patients and making a plan gave me that extra push to fine-tune my physical examination skills in order to work towards an active differential diagnosis. There are many medical specialties in which I have had no clinical experience so far in the UK but that did not mean those patients didn't come through the door! Taking along copies of our most trusted textbooks was invaluable for the times when the diagnosis was complex and a thorough examination was needed. A proud moment was when a chest x-ray demonstrated two clear fluid lines at exactly the level I had detected clinically through auscultation and percussion; it was also the first time I had used vocal fremitus to any effect.

I encountered many diseases and conditions at Groote Schuur that I have rarely seen at home, including TB meningitis, end-stage AIDS and Takayasu arteritis. A new skill I learned was being able to take a safe history and put together a picture even when I didn't know a lot about a given condition. I will come across rare diseases during my career and won't always know every symptom – but as long as there is a structure and I can rule out 'red flag' symptoms and remain composed, it should be interesting and not daunting. Screening for TB and HIV became part of my standard history taking and I no longer feel a taboo around asking those kinds of questions. I also helped to set up a streptokinase infusion for a patient in Resus with on-going ST elevation, an intervention I never thought I would see. In the UK I may only occasionally come across disseminated multi-organ TB or a JVP so high it appears undetectable, but it was very useful to see the extreme end of conditions we see and treat every day, if only to know what to avoid.

Something I have been keen to improve on before completing the MBChB course is basic ward skills such as putting up fluids and administering oxygen confidently. Aside from performing an ECG and ordering x-rays I had a chance to practice more new skills at Groote Schuur, including drawing up and administering nebulised medication and prescribed oxygen. I would have liked to have carried out more practical procedures, but due to the high HIV risk this was not possible. If I had another chance to study abroad I would like to experience a specialist area such as within the prison service. It would also have been useful to know some basic Afrikaans language to help with communication.

This week, my second week back in the UK I had a shift with the on-call surgery team. Having spent so much time in an emergency setting in S.A., I felt undeniably more confident being in A&E. We were called to a trauma call in Resus and I was able to offer a helpful pair of hands, which I also attribute to the skills I gained in South Africa. I received a comment from the Registrar here about showing confidence, which means the improvement I have felt within me is noticeable on the outside.

**Word count: 3236**