TRAUMA

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Elective Report: Trauma in Johannesburg/Phoenix as part of the Christina Swain Trauma Fellowship

For my elective I was extremely fortunate to be awarded the Christine Swain Trauma Fellowship. This meant that I was able to travel to St Josephs hospital in Phoenix Arizona and the Chris Hani Baraganath hospital in Johannesburg, both of which are level 1 trauma centres, and learn how to manage trauma in both well and poorly resourced settings.

The Bara is one of the largest hospitals in the southern hemisphere and one of the busiest. The sheer volume of trauma is so much greater than that seen in the UK and US. The first time I walked into the surgical pit (where the trauma patients are waiting to be reviewed) I had never seen so many trauma patients waiting to be seen by a doctor. There was a small desk with two chairs on which three doctors were perched, writing notes for the 10-15 patients sitting in front of them, and another 5-10 patients on stretchers waiting with paramedics to be reviewed or awaiting the results of their imaging. These patients had injuries which ranged from stab/ gunshot wounds to the limbs, burns, road accidents to fall from heights. All these patients had suffered trauma to varying severity and the vast majority of them would be managed in resus in the UK. I was very quickly made to feel like one of the team and worked just as though I was one of the interns, and despite the severe shortage of staff, the doctors would readily help you manage difficult patients or teach/supervise procedures such as chest drain insertion, CVP lines, LP's.

What further decreased the stability of these patients was the often significant delays from the time of the trauma to presentation to hospital as transport to hospital could be quite difficult for many patients. If they call an ambulance it could sometimes take hours for them to arrive. Some patients are not aware that the admission fee can be waivered if they are unable to pay and so they don't present until quite late. Also there is no reliable public transport to the hospital and patients take minibuses called taxis which are often driven dangerously and responsible for a high number of motor vehicle accidents. These taxis often stop running in the early evening and so many patients can be stranded in the hospital overnight once discharged.

The day begins with ward round at 7am in resus which is attended by all the doctors in the trauma unit, this then moves to the surgical pit and then the wards and ICU. Afterwards ward work is carried out and this consists of management plans being written up for patients and procedures such as chest drains and central lines being carried out. At 8 am there was a trauma meeting where the unit would meet to discuss any issues and the outcomes of the trauma surgeries of the previous call. On some days there is medical student teaching, radiography meetings and grand rounds. After this doctors and medical students who have been working from the previous morning are permitted to leave and this can mean that you do a 28 to 30 hour shift, sometimes up to 35 hrs. The students who have come in that morning can then do

ward work, help out in resus/surgical pit or observe surgeries. As a student you are required to do a certain number of shifts and there is a rota to ensure that there is at least one student with the trauma unit at all times. They are used to having international students and doctors visiting and you can take time to travel. The doctors, especially the interns are extremely friendly and welcoming which creates a fantastic working atmosphere.

At times I witnessed some quite surreal situations. One day we were doing a ward round when a patient with a stabbed arterial bleed was brought into resus, one doctor quickly got a colt suture and while the other one held the patient down and having stitched him up within minutes they rejoined the ward round, and everyone just continued on as normal. Sometimes if you are clerking a patient in the in the early hours of the morning in the middle of the surgical pit, as all the cubicles are full, then there can be 30 pairs of eyes watching everything you do, while they wait for their turn to be seen. The hospital also experiences regular power cuts and as such doctorshave to be resourceful, for example I was assisting in a surgery done by the light of a mobile phone while backup lights were sought. The hospital also frequently ran out of equipment such as stitch packs, and in theatres there was often instruments which didn't function. Also broken instruments didn't always get replaced. This can be very frustrating if you see patients deteriorate because of this.

Alcohol is a high contributing factor for much of the trauma, especially on pay day, Friday and Saturday nights and nights with big sports matches. There are numerous assaults, especially with guns, knives, bricks and broken bottles and I saw quite a few human bites and ears that were bitten off. The pit sees patients with varying degrees of 'minor injuries' which range from scalp laceration penetrating to boneby stabbing, to hot water burns. Paediatric trauma is also managed alongside adult trauma by the trauma team and usually one surgical registrar on the paeds rotation, with only two paeds beds in resus. Each day I saw at least two young children with major fire/hot water burns. The situation is much worse in winter when paraffin is used as fuel. The sheer volume of trauma is much greater than that seen in the UK and US, however, having been to Phoenix first and having had the opportunity to take part in the ATLS course in SA, I found I was better able to manage patients.

St Joes in Phoenix was another fantastic experience. The day as part of the trauma team begins at 4.30-5.00am at handover. The team,including you, reviews all the patients, the majority of whom are in ICU and the rest in the wards and then these patients are presented at ward round. You are given a set of patients whose treatment you are involved with and who you present each day at rounds. The students on the firm are given a bleep and as traumas arrive in hospital they are bleeped along with the rest of the team. Trauma is managed according to ATLAS principles and so an entire trauma team is present (unlike the Bara where there was times when *I* and a couple of paramedics was the trauma team), although you do get the chance to run trauma calls. There are also opportunities to do procedures and spend time in theatres. I also had the chance to spend a couple of days with the fire department, who attend emergencies as the paramedics are also trained firefighters. Apart from the fires, the calls that I observed with them were quite similar to the ones in the UK such as seizures, hypoglycaemic events and falls.

Both of these placements were by far my best experience in medical school. Travelling to the Bara you really need a car, as it's not safe to walk around the area, and you need to take precautions such as ensuring that you try and limit driving at night (although there is no real need to) and ensuring that doors and windows cannot be opened.There are other hospitals in Johannesburg where you can get onsite accommodation. Being in SA particularly has increased my confidence in trauma and medicine as you develop skills in managing patients through the sheer number your treat. As the trauma unit is so busy you (if you demonstrate competence) can end up solely managing an entire resus. I personally found the experience of being at the Bara fantastic and definitely want to go back there to work in the future.If you have an interest in Trauma Surgery I highly recommend applying for the Christina Swain Trauma Fellowship.