ELECTIVE (SSC5b) REPORT (1200 words)

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

Having never travelled further than the Middle East, I was very excited about organising this elective. I was apprehensive initially about travelling alone to a country I had not visited before, but was immediately put at rest when I arrived and was greeted with the amazing hospitality of Australia. I had a passion for pre hospital medicine since the first year of medical school, and therefore was very eager to begin my placement with QAS; and the placement did not disappoint. Prior to travel, I had set myself some objectives, and this report aims to answer them.

1) Explain the pattern of trauma injuries and their mechanisms in Brisbane and discuss the impact on global health

One of the things I had noticed from as early as my first shift was how different the trauma was compared to the trauma in the UK. Having completed 4 years of the PCP programme at Barts, I saw more high impact trauma in my first 3 shifts with QAS than the whole time on the programme. The reasons for this are that there is much more space in Brisbane compared with London and therefore more speed, and thus higher impact and more injuries when things go wrong. Furthermore, their cars are so much bigger and heavier here than in the UK, therefore if a pedestrian is hit, or there is a road traffic collision, there is scope for much bigger injuries. In my time here, I did not see one shooting or stabbing, whereas in London on my shifts, this was in at least once every shift. I discussed with one of the paramedics who said that it is not really a culture that they see in Brisbane but he does believe that the incidents are increasing and they may eventually hit our level shortly. With regards to trauma and the impact on global health, trauma – in particular road injuries - are one of the largest causes of death worldwide with the World Health Organisation ranking it 10th in the top 10 causes of death in 2015. When relating it to Australia, in 2013, WHO stated that there were 1192 fatalities on the road, with the trend dropping from 8 deaths per 100,000 population in 2004, to 5 deaths per 100,000 in 2013. Comparing this to the UK, there were 1770 road traffic fatalities with the trend of deaths per 100,000 population being much lower than in Australia. These figures support the discussion above, as the population of Australia is under half of what the population of the UK is, and therefore to have an almost comparable number of deaths reflects on the intensity of the road traffic accidents.

2) Understand the pre hospital healthcare system in Brisbane and appreciate and explain how it is different to the NHS and also contrast it to the healthcare in developing countries

The pre-hospital healthcare system in Australia is largely quite similar to the UK. Having been on the pre-hospital care programme at Barts, I was fortunate enough to have had some experience of the system in the UK, and immediately felt at ease when I arrived on my first shift as the set up was very similar to the shifts that I have done in the UK. A difference that I had noticed however, was that in Brisbane, they tend to do more 'scoop and run' jobs, whereby when a paramedic notices that a patient is quite unwell, they will be more likely to get the patient to hospital for treatment. In the UK, more resources are usually called, particularly the HEMS team, and a lot more road side interventions are performed. This in part could be due to the fact that in Brisbane, the calls are usually a lot further from a hospital, so to get started on the journey is seen as advantageous, but also because of this the converse argument could be that due to the distance, more interventions might be indicated. Furthermore, which I find fascinating, in Australia the critical care paramedics administer anaesthetic drugs, intubate and transport the patients as the doctors would on HEMS in London. They have such great skills and responsibility, and it works really well. Having discussed with other students on electives in developing countries, due to the scarce resources and different infrastructure, I understand that pre hospital care relies largely on clinician experience and less on use of equipment and diagnostic investigations. Therefore patients are generally diagnosed and started on treatment before any further investigations are carried out. Due to this, there is a higher rate of mortality in the prehospital environment then there is in developed countries with an established pre hospital system (Anand et. al. 2013).

3) Describe how the opioid crisis in Australia affects emergency departments in Australia and the impact on global health and how this differs from the UK

As in the US, Australia also suffers from a huge opioid problem. It has been recognised that due to ease of access to drugs such as fentanyl from GPs, it is making it much easier for patients to abuse the drug. Despite fentanyl also being a controlled drug, as in the UK, there is no real database which will highlight patients who are 'doctor hopping' in order to get their medication. Also, an investigation found that patients were being prescribed these drugs without confirmation of their identification and examinations (Radio National, 2017) In Queensland however, a database is available which highlights patients who are suffering from addiction, when a prescription for them is generated. Also, there is a consult line available to doctors when they believe one of their patients could be exhibiting drug seeking behaviour. The UK is not experiencing as much of a problem as the US and Australia however the trend is slowly increasing. In 2018, Mordecai et. al found that there was a huge North / South England divide in the prescriptions of opioids, with the lower socioeconomic areas of the North of England receiving more prescriptions for opioids.

4) Learn the trauma protocols out there for different types of injuries in the pre-hospital environment. Also build my confidence to manage sick patients in a pre hospital environment and practice handing over the management to the receiving hospital

Many of the protocols in Australia used in pre-hospital care are similar to the UK, however there are some important differences in the care that is delivered in Australia. Firstly, the critical care paramedics on the HARU carry a portable ultrasound machine which is so invaluable to the care the patients have received. In one particular patient, who looked quite well, the ultrasound was able to identify a fractured pelvis which was a huge cause of blood loss. This changed the management and urgency of the transport of the patient and enabled the patient to be appropriately treated. I believe that this is one of the best interventions that Australia pre-hospital medicine has and would be essential in the UK. Furthermore, the paramedics also carry blood, which is something only the HEMS team carry in the UK. This allows patients with significant blood loss to be refilled as soon as possible thus improving mortality and morbidity. Finally, in Australia, the HARU team are a consult line to other paramedics across Queensland to enable them to get advice at any time which is great. This enables that the best possible care is being provided to these patients. A particular example was when a patient was having a STEMI but was an hour away from hospital, the paramedic that I was with was sent the ECG from the patient, and was able to coach the paramedic on scene on the management, and make the decision to thrombolyse the patient. When the patient arrived in hospital, the ECG was normal! This meant that the decision made was the correct one and is something that in the UK would have required a doctor on scene. This is a great use of resources and really makes a difference to patient care in Queensland.

I was able to practice hand over and management with the paramedics on the way to the case or just after the case, which really helped with my learning. I enjoyed being able to speak to the paramedic about what my management plan would be without the pressure of it being during the case. Also it helped to practice a handover without having to actually do it to the team waiting. In London, I am able to handover to the teams, however the patients are not usually as unwell, whereas here in Brisbane the patients we were bringing to hospital were very unwell so it was not appropriate for me to handover. Something that I found really interesting during handover at the Royal Brisbane (trauma hospital in Brisbane) was that the there is a video link to the surgical team in theatre, enabling them to watch the handover and make decisions in real time in theatre. This saves so much time, and waste of journey time down to trauma calls etc. This was a very impressive and efficient system.

References:

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