ELECTIVE (SSC5b) REPORT (1200 words)

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

1. What are the most common conditions encountered in Aksum University Referral Hospital's emergency department?

The emergency department at Aksum University Referral Hospital differed greatly from emergency departments I have experienced in the United Kingdom. As a relatively new hospital and with its target population being largely rural, it is unsurprising that this ED had very little foot traffic. This department was only used to seeing approximately five patients a day, a stark contrast to the approximately 450 patients a day seen at hospitals such as Newham. During my time in the ED, the vast majority of cases seen through the ED were traumatic injuries and surgical emergencies, primarily bowel obstruction. It was not uncommon to see violent injuries, as we saw two gunshot victims in one day as well as a patient who had been struck in the head with an axe.

Patients arriving to the ED would first be seen by a team of highly skilled nurses, who would perform a thorough assessment, including vital signs, and resuscitate the patient. Following this, an intern, the rough equivalent of a Foundation Year 1 doctor, would assess the patient and contact a more senior doctor for advice about their plan. In this respect, the interns had a high level of responsibility and were very assertive in suggesting a diagnosis and management plan for their patients. In fact, in many simple cases, such as a skin laceration, the intern themselves would suture the injury, administer tetanus immunoglobulin and antibiotics, and discharge the patient with minimal senior input.

During our time in the ED, we helped a British ED consultant to deliver training sessions to the local staff. We provided simulation training, where we used a manikin inside the department itself. Although it took several attempts before the staff became accustomed to treating the manikin as if it was a real patient, once they did, this training was useful in highlighting areas of improvement for the department. For instance, during a cardiac arrest scenario, we found that the defibrillator was being stored in the back of a closet and not plugged in!

One of the major barriers for patients to visit the ED was cost. All of the ambulances in Ethiopia are run by private companies, so for patients in the hospital's rural catchment area, a visit to the hospital involves the cost of transport as well as the cost of leaving their farm untended for the period of their illness. Therefore, patients would usually present to the ED only when their conditions were severe enough to warrant such a burden, which contributed to the pattern of diseases we saw.

2. How is the healthcare system organised in Ethiopia, and how does this differ to the UK's healthcare system?

In Ethiopia, the majority of primary healthcare is provided through health centres, which are located in communities and serve approximately 25,000 people each. These centres are led by nurses, midwives, and health officers. The centres provide a wide range of services, including maternity and birthing services, childhood vaccinations, and HIV/tuberculosis treatment. In addition, these centres serve as the source of important public health interventions in Ethiopia, as the role of the health officer is also to promote positive health behaviours in the local community. The health centres are similar to general practitioners in the United Kingdom in that they represent one gateway to hospital-level care, as health workers at the centres send patients to the nearest hospital if they are unable to manage the condition themselves. We were fortunate enough to be taken on a tour of a health centre by a health officer during our visit. I also was given a booklet from the WHO and Ethiopian Ministry of Health, which was used for training health officers. The book was their equivalent of NICE guidelines for treating the most common causes of mortality in the under-5's. I was most interested in how the booklet adapted modern treatments for low-resource environments. For example, it explained how to create a spacer from a water bottle in case of an asthma attack.

Hospital care in Ethiopia was very similar to that of the United Kingdom, with both secondary and tertiary hospitals. The majority of the country's specialists are located in the capital, Addis Ababa. Therefore, Aksum University Referral Hospital provided mostly secondary services, including general medicine, general surgery, paediatrics, obstetrics & gynaecology, and ophthalmology. At Aksum, any patients needing more specialized services would be referred to Mekele Hospital, which was approximately a 4-hour drive away. For example, one gunshot wound victim had a fractured femur and required transfer to Mekele for orthopaedic intervention. The doctors thoroughly assessed this patient for internal bleeding or additional life-threatening injuries, as they were worried about whether or not the patient would survive the long journey to the next hospital, which he fortunately did!

3. What are the main factors influencing access to high-quality medical education and training in Ethiopia?

In 2011, Aksum University Medical School was opened alongside 12 other new medical schools in Ethiopia, aiming to combat the lack of doctors in the country relative to the population size. A national medical curriculum was created, drawing on American, Canadian, British, and Dutch systems. A partnership was established between Barts and The London and Aksum University in order to support the development of staff at this new medical school and to ensure high standards of education. Some of the major challenges in maintaining the quality of the education at Aksum included the fact that many of the staff at the hospital are very junior, with little teaching experience themselves. In addition, the hospital found it difficult to attract senior and highly experienced doctors to Aksum due to its location in the rural Northern part of the country, which has a large impact on the learning of students when clinical medicine is much like an apprenticeship. It also made it challenging to recruit and retain strong senior leadership for the medical school.

After spending time with the Ethiopian medical students, I was highly impressed with their knowledge level. Their discipline and work ethics were admirable, and therefore, many of them would spend 5+ hours every day revising many of the same textbooks I have used over the years. However, during our period of stay at Aksum University, a large proportion of the final year students sitting their qualification exams failed. It was speculated that this was largely due to the limited clinical exposure these students had had with the low patient flow through the new hospital that had been created for the new medical school.

On the other hand, one aspect of their curriculum which I think would be fantastic to implement in Britain was assigning each student 2-3 beds in the nearby St. Mary's Hospital. The students, under supervision, would take the history, examine, and complete the investigations for their patients, and they would be responsible for presenting this, alongside a management plan, at the following morning's ward round. As there were not enough patients for the students, they were each assigned specific days of the week where they were meant to be looking after their beds. I believe this type of learning fosters a strong sense of patient responsibility and forces students to begin thinking in a more practical, rather than theoretical, sense about how to approach and manage a patient.

4. Reflection on my experience teaching in Ethiopia:

Throughout medical school, I have had extensive experience with peer teaching, both as a peer teacher and a student. During my trip, I was excited to organise a session teaching the students. Alongside my peer from the UK, we delivered a lecture on blood transfusions and their complications and a brief talk on what a peer teaching program entails and our experience of it in the UK, as Aksum did not have one. Firstly, it was interesting picking a topic for this teaching session. The students were supposedly happy to attend a teaching session on any topic of our choice, which did little to narrow down the subject. However, we also wanted to discuss a topic of relevance to them. I found it interesting how we (and their textbooks) could potentially teach them about treatments and investigations that they did not have and how they resolved the mental dilemma of knowing what you should do whilst also knowing what you could do within the limits of your environment. Attempting to deliver an interactive lecture in a very shy society was challenging, and it required creativity to encourage students to participate. We asked them to get into small groups to work through problems and then discussed it as a class at the end. We also asked students to write down their ideas on paper to be collected at the end. Whilst this proved effective, it was interesting learning to adapt my teaching style to the different audience. Lastly, it was interesting to see students' opinions on peer teaching. Some were in favour of learning in a different style, whereas many others thought it detracted from their textbook time. This emphasized the value they place on factual knowledge in their curriculum. Also, very few students wanted to teach themselves, likely due to shyness. Although I am a strong proponent of peer teaching, this experience highlighted that it is not necessarily universally applicable.