ELECTIVE (SSC5b) REPORT (1200 words)

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

My medical elective took me to Malawi, one of the smallest and least developed nations in Africa. The country is truly deserving of its nickname, 'The Warm Heart Of Africa', and I will never forget the friendliness of the local people or the beautiful unspoiled landscapes. However, Malawi has one of the poorest economies in the world and is troubled with widespread poverty, unemployment, overpopulation and a desperate reliance on foreign aid for its sustainable development. The sad consequence of these issues is not highlighted more clearly than in the busy Queen Elizabeth Central Hospital in the second largest city of Blantyre. Over the course of 6 weeks with the Paediatric Department, I learned more than I ever expected about the stark contrast between developed Western healthcare provision and this incredibly challenging, resource-poor setting. I also spent some time in the Billy Riordan Memorial Clinic on the shore of Lake Malawi to gain a different insight into medicine in this country.

Malawi has a government funded healthcare system with rural health centers, regional hospitals and only 4 central referral hospitals (such as QECH, Blantyre). While this is not dissimilar to the structure of our own NHS, unfortunately the comparisons stop there. Due to a massive lack of doctors only the few largest hospitals can be staffed with qualified clinicians, whereas clinical officers and nurses provide the majority of regional care across the country. As such, the impact of those foreign doctors volunteering or employed more permanently, in any capacity, is profound.

QECH has a number of paediatric wards including an emergency department, nursery, special care ward and oncology ward, with ITU support available in a nearby private hospital. As over 80% of Malawians live rurally, families travel great distances to receive the specialist paediatric care at QECH. With nowhere to sleep or wash, the hospital grounds are brimming with relatives making this journey, who live for as long as necessary within the hospital site and create a community of their own. On the wards, the most basic provisions are found wanting. As many beds as can fit are crammed into each room, the resulting noise level and smell can be startling.

Important equipment that we take for granted in the UK is unbelievably valuable in this setting. For example, something as routine as a urine dipstick was in desperate shortly short supply throughout the hospital. It is clear that over time the staff have adapted and used their own ingenuity to make the most of what is available; equipment like nasal cannulae and IV giving sets are washed and reused, while urinary catheter bags can be seen draining any number of other cavities in the body. Ongoing and serious funding issues unsurprisingly affect pharmaceutical supplies; the most efficacious, desirable, recent drugs are all too often not available and this demands a more thoughtful and measured approach to prescribing. Access to investigations is limited meaning diagnosis and treatment is largely guided by clinical presentation. Chest X-rays are reserved for the sickest children and more complex imaging is not possible. While there is an MRI machine, the waiting list is many months.

Many of the patients will have been unwell for a long time and not sought medical attention, they may present with advanced signs of disease or have adapted physiologically to their illness. It was not uncommon to see children with an Hb around 5 g/dl (or PCV around 15% in local practice) and appear perfectly well. In a clinical environment like this it becomes very important to be able to recognize a sick patient. This setting is similarly helpful in learning to differentiate between acute and chronically ill children.

Malawi's neonatal mortality rate is reported at 22 deaths per 1,000 live births and a major contributor to this is respiratory distress in premature infants and unwell children. Continuous Positive Airway Pressure can improve survival and is a mainstay of treatment in the UK. CPAP machines cost many thousands of pounds and therefore an alternative 'bubble CPAP' device has been fashioned and trialed in QECH. It is effective and a fraction of the cost and can be managed by nurses. This is one great example of an initiative to save expense without compromising patient outcomes. This sort of resourcefulness, where appropriate, goes some way to alleviating pressures on the system. However, there are vast improvements that could be made to healthcare governance strategies and the platforms of communication within the hospital.

A senior doctor will typically lead a ward round each day but given the sheer number of beds, patients may go unseen over a 24-hour period. Routine observations are regular in the UK however in Malawi, the staffing shortage means vital signs and important indicators of poor health are not often checked in many cases. The expected level of care is a far cry from that which we see at home and reminded me of the privileged position we are in.

The country's biggest health issues and the leading causes of death include HIV/AIDS, malaria and malnutrition, which is reflected in the paediatric population. One or all of these three conditions will complicate the treatment of a large majority of cases. Acute respiratory infections are another leading cause of mortality in this population and pneumonia related deaths are particularly common in children under the age of 5. For a number of reasons including early sexual encounters, multiple partners and a lack of education the HIV endemic remains extensive in Malawi, figures suggest anywhere from 10-30% are positive. Fortunately, there is now widespread access to anti-retroviral drugs that have decreased mortality in patients and significantly reduced the chance of vertical transmission – a 6-week course of ARVs from birth typically clears a child of reactive HIV. Despite this, there remains an estimated 170,000 children living with HIV in Malawi.

One case that I was involved in was a 13-year-old girl who presented to the ED with convulsions following a week of feeling unwell and not eating, alongside a PCV of 16. She tested negative for malaria but was visibly malnourished. The mother continued to deny that her daughter was HIV positive, however a full body examination revealed woody black lesions on the legs (consistent with Kaposi's Sarcoma) and candidiasis in the mouth that suggested HIV infection. This suspicion was confirmed serologically and treated accordingly. This case was saddening to me and highlighted the stigma that remains around a diagnosis of HIV despite the well-documented benefits of early recognition. It also raised an important safeguarding issue in that the mother's denial of her child's status could have meant she was deliberately hiding the information or the child had been recently exposed to HIV sexually at such a young age.

Another interesting case that I came across, during my time in the clinic, was a male adult with a Buruli ulcer on his arm. The patient was returning for a review at the end of his 8-week course of antibiotic medication. With his permission, I photographed the lesion (shown below) as it was very extensive and striking, even at this stage in his treatment. A Buruli ulcer is an infectious disease caused by the organism Mycobacterium Ulcerans, which belongs to the same group as those that cause Leprosy and Tuberculosis. The organism releases a toxin that dampens immune function and leads to tissue death. It is especially hard to detect early because there is usually no pain or fever associated in the early stages. The disease is most commonly seen in sub-Saharan Africa and it is believed that sources of water, such as Lake Malawi, are involved in its spread. It is particularly prevalent, and emerging, in West African countries but only 2,000 cases is officially reported each year worldwide. Although this was an adult man, the disease is predominantly seen in children under 15 and the proportion of all patients that are paediatric cases is much higher in Africa than more developed areas. If detected early and treated appropriately, the vast majority is cured.

Working in the community clinic was very different to being in the hospital. Although there were queues for a great distance outside the clinic door, there seemed more opportunity to spend time with patients and make clinical decisions accordingly. The patients were generally much less unwell and though one day saw 30 new malaria cases alone, they had usually presented early enough to be treated easily. Being a charity run clinic it was also much better stocked than the government funded hospital in Blantyre, even a little extra funding goes a very long way.

Knowing that nearly all doctors are based in the large central hospitals, I aimed to find out more about the role of family medicine and community based doctors. I feel it is likely that a greater supply of home-grown doctors with training in family medicine/general practice could improve health outcomes in regional areas of Malawi. Better programmes, scholarships and resources for specialty training in the largest hospitals and across borders attract most medical graduates. Training in family medicine is often less established and appealing. My encounters with interns in QECH reflected this and I asked a number of questions around it to a group of juniors I met. There is a recently established training pathway within the University of Malawi for those with an interest in family medicine; this may help to inspire some to train as family doctors. Otherwise, primary care remains an area that is hugely underestimated in the struggle to improve health provision. The population's first point of contact with the healthcare system must surely involve a trained doctor|? And to see more doctors in rural communities would surely be a step on the road to improved global healthcare? The world health assembly and various academics echo this view.

Overall, this elective was a fantastic opportunity to gain insight into medicine in a developing country and to learn from the challenge this presents. I learned a lot about my ability to cope with unfamiliar and difficult situations. I gained interesting knowledge about infectious diseases and conditions that I most likely will not ever see in this country. I had the opportunity to hone my diagnostic skills and cope with much greater personal responsibility in a clinical setting. Finally, I was privileged to explore the beautiful country of Malawi and meet many fantastic people throughout my adventures.