Queen Elizabeth Hospital, Blantyre, Malawi.
7 Month Report

Dr Polly Marshall-Brown

I have now been volunteering within the anaesthetic department of Queen Elizabeth Central Hospital (QECH) in Blantyre, Malawi for the last seven months and it is proving to be a hugely rewarding experience in many different ways. This fantastic opportunity was helped by a very generous grant from the AAGBI to put towards my expenses, for which I am incredibly grateful.

Malawi is in Southern Africa with a population of nearly 16 million people. It is ranked as one of the poorest countries in the world. The population suffers from a high prevalence of diseases such as HIV/AIDS, TB and malaria. Life expectancy is just 54.8 years. According to statistics from the World Health Organisation (WHO) the total expenditure on health per capita is only $77/year. QECH is a government run, tertiary referral center in the country's second largest city.

The anaesthetic department is made up of three ex-patriot consultants and one Malawian consultant, four Malawian registrars and twelve anaesthetic clinical officers that provide a service for eight theaters and a four bed Intensive Care Unit (ICU) within the hospital.

I joined the department in August 2013 when I took a year out between CT1 and CT2 and immediately I was made to feel very welcome by the entire department. Initially it took a bit of time to get used to the differences between anaesthesia in the UK and in Malawi. Firstly each theater has a different anaesthetic machine to get used to and there is no piped oxygen supply only cylinders or oxygen concentrators. A lot of the equipment is reused including endotacheal tubes, facemasks, guedels and suction catheters, they are soaked in chlorine, then rinsed and left to dry. For monitoring of the patient most of the staff have their own lifebox saturation probe that give O2 saturations and heart rate, blood pressure and ECG can be recorded but only one of the theaters had CO2 monitoring.
Pre-operative assessments are usually carried out in theater and investigations are very limited usually to just a full blood count. Post-operatively there is a lack of resources and staff meaning that there is very little monitoring, particularly when the patient returns to the ward. Being able to give a good anesthetic while taking into account the availability of resources made for a challenge when coming up with an anaesthetic plan. Drugs that are used are thiopentone, suxamethonium, Ketamine, Vecuronium, and Pethidine. Halothane is the only anaesthetic gas available. Bupivacaine is given for spinal anaesthetics and ephedrine, adrenaline and atropine are readily available.

During my time here I have worked closely with the anaesthetic clinical officers in theater and I have learnt a huge amount from them. I have been involved in a wide variety of cases including many paediatric, obstetric and emergencies. My learning curve has been steep but I feel that my clinical skills are benefitting hugely. The surgery that takes place is very varied and interesting and I have been involved in several fiberoptic intubations, seen a pneumonectomy, and dealt with a case of malignant hyperthermia.

Aside from clinical work, I have been helping with a study looking into the knowledge of sepsis of clinical officers and medical students. This is important information as these are the front line staff in the A&E department and out in the district hospitals who will be the first to diagnose and treat sick, septic patients. Data has been collected over several years via a questionnaire based on the Surviving Sepsis Campaign (SSC) guidelines. The results suggest that knowledge is lacking in some areas particularly in the treatment of sepsis and we plan to restructure the teaching for the medical students to focus more on this point.

I have also had the opportunity to be involved in the teaching of the fourth year medical students at the Malawi College of Medicine during their Anaesthetic and Critical Care teaching block. This involved small group teaching on anaesthetic equipment and airway skills and moulage stations running through different emergency scenarios with the students. At the end of the two weeks there was a
written exam and a practical test of which I was one of the examiners. The students all did well and there was only a 2% fail rate.

Overall I am incredibly impressed and humbled by the hard work and dedication of the anaesthetic staff here despite the lack of resources and poor staffing issues they do a really great job. Its only been 7 months but I feel that I am learning so much, it is an invaluable experience for me and I also feel that I have had a great opportunity to share my skills and experience with the clinical officers in the department. Not only clinically has this been of great benefit but also with the research and teaching that I have been involved in I feel that it will have a lasting impact on my training and I hope that it will help to improve the anaesthetic teaching in Malawi.