Africa Elective Report

Name: **Mariea Brady**

Current Clinical posts: **Final Year Medical Student (Graduate Entry), University of Oxford**
Dates of placement: 3rd February, 2019 – 10th March, 2019

Name of hospital/centre visited; date and duration of the visit; key clinicians worked with:
Beit CURE International Hospital, Blantyre. Dr Nicholas Lubega, Dr Sam Maina, Dr Jes Bates

Bursary/award granted; awarding body should be mentioned: **Bursary for Affiliate Medical Student Elective Placements in Africa, Royal College of Surgeons of Edinburgh**

Malawi describes itself as "the warm heart of Africa" and it is indeed a beautiful country; its people happy, hospitable and friendly. Within hours of arriving at the hospital, members of staff are teaching you Chichewa (their national language) ensuring that you know how to say "how are you?" "Thank-you" and "sorry!" They take particular delight in Azungu (white people) learning their language. They also ensure that you are well fed, a plate of nsima (corn porridge) with a side of meat/fish in sauce and fresh salad (with coleslaw) is provided at lunch time. Malawians tend to eat with their hands and dip the nsima into the sauce, a skill I didn't quite acquire! At the Beit CURE International hospital the kitchen provides meals for patients, their guests as well as all members of staff as requested.

Beit CURE International Hospital is a remarkable place; it is an orthopaedic hospital with the motto "adults pay a fee so children walk free." As such it is a private hospital for adults, who pay a fee for their elective orthopaedic surgery (such as total hip/knee replacements), but a free hospital for children. One of the most amazing things about paediatric orthopaedics is the dramatic impact you can have on a child's life; correction of clubfoot is a wonderful example of a relatively simple and successful orthopaedic intervention which enables children to walk free. The clubfoot clinic runs once a week, it is always a very busy clinic with people from all over Malawi attending. I joined the physiotherapist team every Thursday and learned how to assess (using the Pirani scoring system) and correct (using the Ponsetti serial casting method) severely deformed feet. It was very encouraging to see children at different phases of the treatment (see Figure 1).

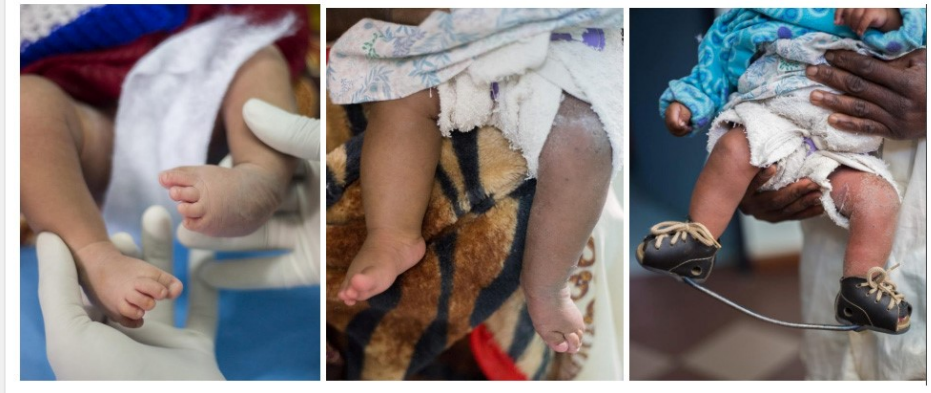


Figure 1: Images of a child's feet before and after clubfoot treatment. The image on the right is of a brace the child has to wear for up to 5 yrs post correction (Source: https://uk.cure.org/2018/08/clubfoot-free-felicity/).

Africa Elective Report

A typical day at the hospital began at 7.30am with a half hour of devotions (Malawi is 80% Christian) where the surgical team meets to pray and read the Bible. This is followed by ward round where it is common to see conditions such as delayed presentation of club foot, chronic osteomyelitis, burn contractures, joint deformities (genu varus/valgus) and cerebral palsy. Following ward round the consultant surgeons attend either surgery or clinic (with both morning and afternoon lists). I was able to attend many clinics (clerking and presenting patients) and surgery (including scrubbing in and assisting). On Friday afternoons, there was post-graduate teaching (Figure 2) and the orthopaedic team from the government hospital across the road (Queen Elizabeth Central Hospital; QECH) come across for case-based discussions.

Figure 2: With the joyful consultants and surgical trainees after a Friday post-graduate teaching session.

I also had the opportunity to spend time at QECH which is starkly different to Beit CURE, it is much more representative of the socio-economic climate of Malawi with typical problems of overcrowding, understaffing and limited resources to deal with the conditions presented. For example, government hospitals cannot afford total hip replacements (standard in the UK), so if somebody presents with a neck of femur fracture they will be treated with a dynamic hip screw and fibula graft instead. In one ward round we visited 80 patients in 4.5hrs (60 men; 20 women). There were many, many cases which needed surgical management, sadly, too many than could be operated on; deciding which patients made the list was an unenviable task. It was particularly disturbing to see preventable conditions which had become significant pathologies (such as failure to reduce a dislocation). There were lots of RTAs with pretty severe injuries (de-gloving of a hand, bilateral crush injury of ankle; both resulting in limb amputation), other conditions included a complete brachial plexus injury, open fractures, abscesses, and osteomyelitis. Ward conditions were grim, the smell was terrible, the heat stifling. The hospital was on its last legs. The work the orthopaedic surgeons perform here is admirable.

My time in Malawi as a medical student on elective was a life experience I shall not forget. Sub-saharan Africa is a complex place and it was a privilege to spend time with the wonderful people at Beit CURE International hospital and QECH. I would like to extend my heartfelt appreciation to the RCSEd for awarding me a bursary for elective placements in Africa; due to their generous support I have a greater appreciation of global surgery, recognising the importance of sharing skills and resources to equip and serve those less fortunate than ourselves.

Royal College of Surgeons of Edinburgh Elective Report

Name: Jamie Mawhinney

Position: Medical Student, starting FY1 at Guy's and St Thomas' NHS Foundation Trust in August 2018

Grants awarded: Bursary for Affiliate Undergraduate Elective Africa 2018 and The Royal College of Surgeons of Edinburgh & The Binks Trust Students Elective Travel Awards

My elective period was between 08/04/2018 and 03/06/2018. During this period, I attended two elective placements with two host institutions:

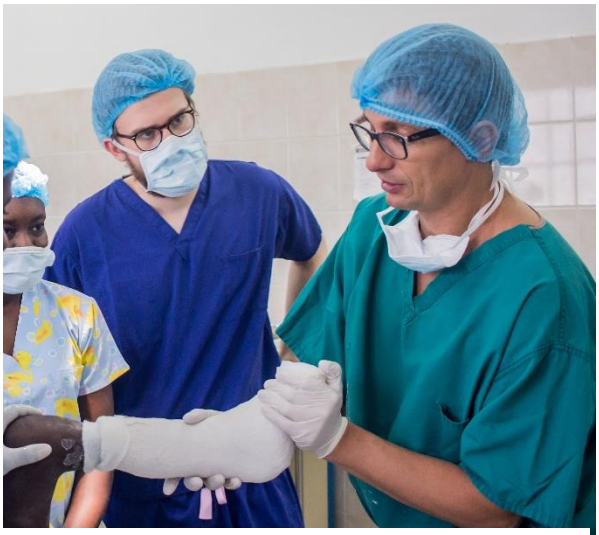
- 08/04/18- 06/05/18; Jigme Dorji Wangchuck National Referral Hospital, Thimphu, Bhutan
- 07/05/18-03/06/18; Beit CURE Hospital, Lusaka, Zambia

For both of these placements I was attached to surgery, my main educational objective being to develop my own surgical skills in two countries with different healthcare needs. I am very grateful to the Royal College of Surgeons of Edinburgh and The Binks Trust for supporting my elective.

My group of five outside the Khesar Gyalpo University of Medical Sciences of Bhutan (me, far right)

For the first four weeks of elective I was attached to general surgery in Bhutan alongside a group of four other students working in different departments. I was resident in the capital of Thimphu and working at the largest hospital and tertiary referral centre in the country, the Jigme Dorji Wangchuck National Referral Hospital. My responsibilities included the daily resident and attending ward rounds, assisting in clinics and theatre, and performing minor procedures. I had the opportunity to practice my own surgical skills in minor as well as major operations, including sebaceous cyst removal and ingrown toenail avulsion. I also gave some teaching myself to students at the school of traditional medicine on the subject of anatomy.

Similar to the UK, all healthcare in Bhutan is free at the point of use. However, many conditions presented at a much later stage than you would expect in the UK due to a less well developed primary healthcare system and poorer infrastructure connecting small rural communities. Also like the UK, Bhutan is a constitutional monarchy with the king as head of state, and the hospital I was placed at was named after the third king. During our stay in Bhutan, we were very fortunate in meeting Queen Jetsun Pema at an anniversary of the hospital.

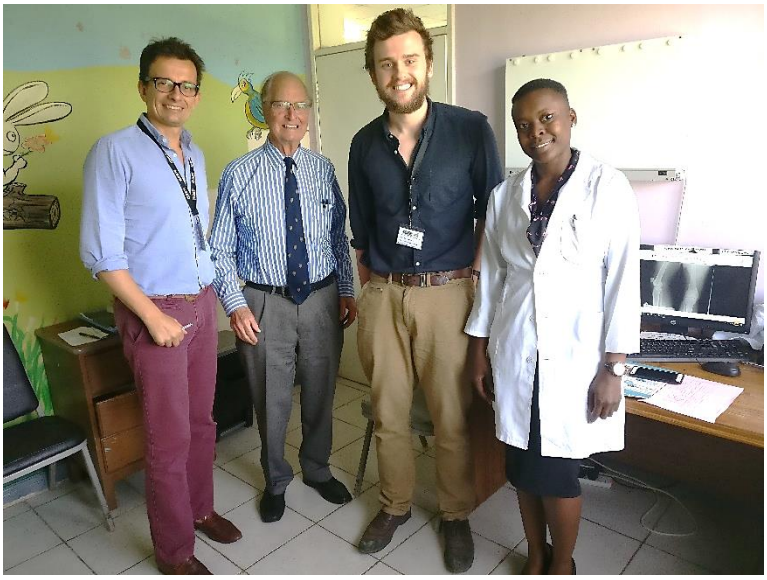


Learning about the Ponsetti method of casting for club foot (from left: Mwamba Mulenga, me, Georgi Lastroni)

Following my elective placement in Bhutan, I travelled to Lusaka for a four-week placement in paediatric orthopaedic, ENT and reconstructive surgery at a small mission hospital. The hospital had an international feel and was run by an American mission organisation with an Italian medical director. The majority of the hospitals work was made up of orthopaedic cases, and therefore this was also where I spent most of my time. The hospital saw a very wide range of pathology although a significant proportion of cases were due to club foot. All healthcare for children was provided free of charge, although the hospital does perform a small amount of private adult surgery in order to support its other activities.

In my time off from the hospital, I was able to explore around the local country, including trips to Victoria Falls on the border with Zimbabwe and to the Lower Zambezi river in the east.

In summary, I had a fantastic time on my elective and this has made a profound impact on my life and my approach to my future career. I would once again like to thoroughly thank the Royal College of Surgeons of Edinburgh and The Binks Trust for their support of this elective.



The orthopaedic team at Beit CURE Hospital of Zambia (from left: Georgio Lastroni, Malcolm Swann, me, Mwamba)

Malawi and South Africa Elective Report

Author: Mark Woodward. Final Year Medical Student, The University of Manchester.
Bursary awarded: The Royal College of Surgeons of Edinburgh bursary for medical student surgical electives in Africa.

Malawi placement: 26th of March to the 20th of April.
Kamuzu Central Hospital, Lilongwe & Nkhata Bay District Hospital, Nkhata Bay.
Specialty: Trauma and Orthopaedics.
Supervisor: Mabvuto Chawinga and McPrince Pahuwa.

I arrived at Lilongwe airport, excited to start my surgical elective, and was greeted by my supervisor Mabvuto Chawinga. I was taken aback by the wonderful green, mountainous scenery in the intense sun, as well as the basic living conditions on the outskirts of the city. The city infrastructure was vastly different to home, with roads in ill repair. My commute to Kamuzu Central Hospital consisted of a short walk along dirt tracks then a shared tuk tuk ride with locals.

At the hospital patients waited on stone benches to be seen in the orthopaedic clinic. Three patients were seen at the same time in one busy room. Two clinical officers and one by the plaster technicians. Outpatients records are kept by the patients in a health passport. These are a small book brought by the patients to clinic along with their X-rays, which are analysed on a light box.

Malawi does not have many Doctors, therefore clinical officers do lots of the work senior Doctors cover in the UK, including running clinics and performing procedures. Nkhata Bay District Hospital only has three Doctors: The District Health Officer is in charge of the hospital and has many management and governance responsibilities in addition to clinical duties. The other two Doctors are the Senior Medical Officer and Medical Officer.

At both hospitals I was able to get hands on, assisting in theatre and performing MUAs. Healthcare is free in Malawi, but the surgeons work in challenging conditions with limited resources. Theatre equipment is mostly donated from the developed world. At the district hospital they lose power for hours on a daily basis. In orthopaedics, conservative management such as traction or plaster is attempted first. When fixing fractures we had to use screws that were not the correct size. Furthermore, there is only one CT scanner and one MRI scanner in the whole country.

Medical challenges in Malawi include patients presenting late, high TB and HIV rates and patients presenting with complications of traditional medicine treatment. This includes infection after charcoal is injected into a limb as an analgesic.

There are many successful health programs in the country. The FeetFirst Worldwide charity who arranged my placement, help children with clubfoot. The ponseti method is used nationwide.

South Africa placement: 23rd of April to the 18th of May.
New Somerset Hospital, Cape Town.
Specialty: General Surgery.
Supervisor: Dr Heather Bougard

On arrival to Cape Town I was struck by the similarities to a European city, except the very crowded Townships. Table mountain and the endless coastline were the highlights of the area's natural beauty.

Somerset Hospital is the oldest hospital in South Africa and I worked in the general surgery department. It is a government run hospital with 70 Doctors covering an area of 700,000 uninsured patients with 343 beds. Patients in need of tertiary care were sent to Groote Schuur Hospital. Most patients pay an amount less than ten pounds for treatment, as patients are charged depending on their earnings.

I saw many patients with stab and gunshot wounds in addition to acute abdominal pathologies. Working on calls I gained experience assisting with procedures including laparotomies and chest drain insertions. Surgical techniques used are the same as in Europe but resources are more limited.

During my stay I visited the Heart of Cape Town Museum at Groote Schuur Hospital which has the original operating theatres where the world's first heart transplant took place. It is well worth a visit and the actual hearts are on display. Groote Schuur continues to do groundbreaking surgery and in 2017 surgeons used the eye socket as access for endoscopic minimally invasive surgery, to reach a lesion in the right lateral skull base.

Photographs

Kamuzu Central Hospital
1-4: Orthopaedic outpatient clinic run by clinical officers.
5-7: Around the hospital, including the Dr David Livingstone Memorial Clinic named after my relative.
8-11: Operating theatres.
A: Male Health Passport.

Nkhata Bay District Hospital
12-15: Around the hospital exterior.
16: Orthopaedic outpatient clinic.
17-19: Orthopaedic minor procedure room.
20-21: Male medical ward.
22: List of medications in the hospital.
23-24: Aids for clubfoot clinic.
25-26: Main operating theatre.
27-53: Assisting the District Health Officer with a left inguinal hernia repair.

Cape Town
54: Myself wearing hospital ID, lab coat and TB mask.
55: Hospital residence.
56-64: Heart of Cape Town Museum at Groote Schuur Hospital.

Royal College of Surgeons of Edinburgh Elective Report – Rhys Dore

I undertook a one month medical elective working with the World Medical Fund based within Nkhotakota, Malawi. This is a charity that provides general paediatric outreach clinics to rural villages and weekly HIV clinics.

Three times a week we would travel up to 2 hours via 4x4 to a remote area around Nkhotakota. The drive was cramped and often without seatbelts – but that was hardly anything compared to the many hours that the mothers and children would often have to walk to reach the clinic. They would greet us with songs about health and contraception. This struck me as an interesting health intervention which no doubt works better in a community which depends so strongly on song and story for entertainment.

Clinics would have up to 400 patients in just one day. We would be sat in a school, a chief's house, or even under a tree. I was put to work both mentally in the unending consultations and physically in the heat. My examination skills have significantly improved – no doubt partially due to our only investigative options being limited to malaria rapid diagnostic tests and urine dips. Furthermore, learning the basics of Chichewa allowed me to not only take a brief history but also example my respect for their language and culture.

Some children were especially unwell. This included having heart failure from untreated nephrotic syndrome, painful crises in sickle cell anaemia, and extensive tropical ulcers. This was particularly saddening as parents often refused us taking them to the free hospital due to having no money for return transport. This showed me how the most severe problems are not necessarily about the provision of medical care in the country, but the more difficult logistics of accessing it.

The HIV clinics had far fewer patients from the local area that were followed up long term. The first couple of clinics had poor attendance due to being around school exams. The decision between working towards one's education and focusing on one's health is not one that should need to be made – yet these children are striving to fulfil their academic needs at whatever cost. This reminded me of how much we take our comparatively comprehensive education for granted as children.

I also had the opportunity to visit the general hospital. The gynaecological ward was particularly upsetting as many of the women had experienced late intrauterine death and some were sleeping on the floor. They had become accustomed to no privacy and frequent exposure to unknown clinicians which certainly made me feel uncomfortable. Additionally, many children on the paediatric ward had serious burns with no access to surgical treatments. Their pain was being managed well acutely but I could only hope that their future limb function would not be significantly impacted.

Overall I have had a really interesting and enlightening time based within Malawi. I have significantly improve my clinical skills and knowledge of tropical diseases. Furthermore, I have come to see the difficulties in providing care when facilities are limited and the majority of the population are rural.

I would like to thank the Royal College of Surgeons of Edinburgh for their very generous bursary, without which I would not have been able to undertake this placement.

Royal College of Surgeons of Edinburgh: Africa Travel Bursary Report

Trauma and Plastic Surgery, Johannesburg General Hospital
Alex North, 5th Year Student, University of Dundee

From the 23rd of October to the 1st of December 2017 I undertook my six-week medical elective at Charlotte Maxeke Johannesburg Academic Hospital, spending four weeks in the trauma unit and two weeks in the plastic surgery department. Reflecting on this experience, now from the comfort of my desk, it was undoubtedly the greatest learning experience from my time at medical school. However, I can't deny the sense of trepidation that had set in during the weeks preceding my departure, questioning my decision to trade a sunny beach for the grisly metropolis of Johannesburg. I felt unprepared to deal with the trauma and the working conditions which I would encounter.

From day one I was thrust into the fray, barely having time to take in the numerous causalities strewn throughout the vastly overpopulated ward before I joined the team for my first resuscitation. During my entire time in Johannesburg, there was a constant disparity between staffing levels and the needs of the patients, resulting in a plentiful workload to fill my shifts. My roles included assisting the team in the resus bay or emergency theatre, and when there was a brief lull in urgent cases, clerking patients to formulate management plans for the doctors to review. The experience was demanding, forcing me to develop fundamental skills for when I qualify, whilst also exposing and rectifying some of the weaker aspects of my skillset.

The hands-on-experience was what attracted me to Johannesburg, and there was no shortage of it (especially during Friday and Saturday night-shifts). The trauma pit was saturated with the gun-shots, stabbings, vicious assaults, motor vehicle accidents and further peculiar injuries that people had sustained. I frequently contributed an active role within the resus team, working to: assess compromised airways; perform intubations; recognise and drain haemopneumothoraces; assess blood loss and determine appropriate management plans; manage fractures; reduce dislocations; assess and care for head injuries; perform CPR and much more. Working with experienced doctors, gaining exposure to a wide range of clinical scenarios, and providing acute care for critically unwell patients has provided invaluable clinical experience to further my academic development, and will enable me to be a safer and more skilled doctor in the future.

On a more personal level there was a couple of aspects to this placement that I had certainly underestimated. The resource disparity compared to the NHS was staggering, with patients spending hours waiting to be seen - often having only the floor to lie on. Or patients remaining ventilated in the resus bays for days as ITU was full. Moreover, the hospital frequently exhausted its supplies of fundamental resources, such as blood. It was undeniably frustrating when the standards of patient care were compromised simply because of funding. During my time I tried to follow the shift pattern of the staff, who's hours tended to exceed 60 a week, and in the relenting and unforgiving unit I quickly learned the impact of such working conditions. It would be hard to visit South Africa without a reflection on the circumstances in the country. Whilst still emerging from a dark past, the demographics of the trauma unit, and living conditions I witnessed, demonstrate a dire level of poverty and inequality which is nothing short of shocking. However, I am thankful for the entire experience which was made possible by the generous contribution from the college through its award; 'Bursary for Elective Placements in Africa'. Both the clinical and personal development granted from this time will allow me to improve my practice when I qualify, whilst also adding a greater appreciation of the NHS.

Photos from the trauma unit – consent form attached (hospital had run out of sterile gowns and drapes)