Elective Grant Report

Meet baby Zoe! The mother wanted me to name her baby so I named her after my partner at home.

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I was fortunate enough to undertake my final year medical elective at the KiraKira Hospital in the Makira-Ulawa Province in the Solomon Islands. This was part of a broader scheme called IUMETOGEDA, which involves Bond University students assisting the people of KiraKira in the delivery of medical services, allied health services and more recently architecture, sustainability and town planning. Our role at the Hospital was to assist in the running of inpatient wards and outpatient clinics, as well as attending to any emergency presentations.

KiraKira is the provincial capital of Makira-Ulawa, with approximately 8,000 people living in the area, and 40,000 people in total on the island. The majority of Makira-Ulawa's economy is non-monetary with 80% of the people engaged in subsistence farming and fishing. This is confounded by the very high cost of living, whereby nobody can afford luxuries such as a car. The town has electricity, running water and mobile phone coverage but these resources cannot always be relied upon. It has an airport with a single grass landing strip, providing flights to and from Honiara.

KiraKira is home to the only hospital on the island, with people often walking distances of 30 to 40 kilometres to get to there. A local truck provides transportation to and from the Hospital, but it may take up to 8 to 10 hours one-way due to poorly maintained, pot-hole ridden dirt roads. The country's major referral hospital is located in Honiara, which is an overnight 8 hour boat ride or 1.5 hour plane ride, but this is still largely limited in terms of human and medical resources.

KiraKira Hospital is run by two local doctors, Dr Grace and Dr Arnold, a married couple who are three years out of their medical school training in Fiji. Given their relatively junior level, both doctors have an incredible knowledge base and skill set. This is in part a reflection of the demanding setting in which they have been placed, and a testament to their dedication to their chosen fields. They acted as excellent role models, with myself and fellow students frequently seeking their advice on the diagnosis and management of various conditions in a resource limited setting.

When Dr Grace and Dr Arnold went to nearby villages to deliver outreach clinics or attended training in Honiara, the Hospital would continue to operate under the care of myself, my colleagues and of course the extremely capable team of local nursing, midwifery and allied health staff. Their proficiency in skills such as wound dressings, venepuncture, cannulation and suturing were invaluable in the delivery of both emergency and inpatient care to our patients, and would definitely be admired by many nurses and doctors in Australia.

One of the hardest parts of working in the Solomon Islands was the language barrier. By the end of my elective, despite often being laughed at for my pronunciation and Australian accent, I was able to conduct a very basic conversation in Pidgin English. The following phrases featured very frequently in consults with my patients, and in inpatient, outpatient and emergency settings:

- "You-how?" – How are you?
- "Belly-so?" – Is your abdomen in pain?
- "You short wind na?" – Do you feel short of breath?
- "Mimi-ok?" – Any problems with your urination?

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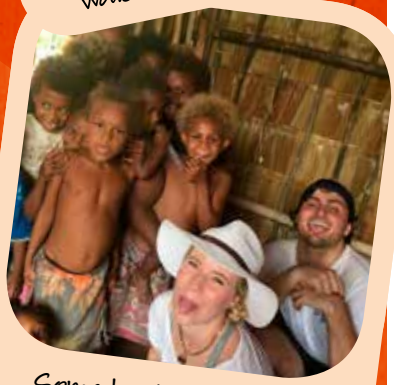
Teaching the children of a smaller community on the northern end of Makira-Ulawa Province how to play 'duck-duck-goose'. The entire village watched on and giggled.



Some local children from northern Makira-Ulawa. Some of these children had never seen a white skinned person and were initially quite afraid of us.

The student team scrubbed up in theatre for a cesarean. I had the role of providing pressure support to the newborn baby as well as suction using a filtered device that required the user to suck on one end.

I ultimately came to understand how common illnesses presented, which made the language barrier much less of an issue. Nevertheless, physical examination and collateral from English speaking family members were extremely important.

Similarly, I began to understand the epidemiology of disease in the area, which differs dramatically from that in Australia. Infectious diseases such as malaria, tuberculosis and bacterial skin, lung and gastrointestinal tract infections accounted for the vast majority of patients requiring hospital admission. P. Vivax malaria is comparable to the common cold in terms of frequency, and ultimately became a differential for nearly every presentation, including but not limited to coryza, chest pain, seizures and bilateral numbness and weakness of the lower limbs. While the emergency departments in Australia greet patients at the door with an ECG and CXR, in the Solomon Islands all patients receive a malaria screen.

As a group we decided that on top of our other duties within the Hospital, we wanted to be involved in the antenatal, perinatal and postnatal care of mothers and their babies. We had a phone with a local SIM card in it, and supplied the local midwives and nurses with money for phone credit. This way, they could let us know if there were any emergencies or imminent deliveries. Over a five week period, we helped deliver 28 healthy and happy babies.

All but one delivery were normal vaginal deliveries, which was an emergency caesarean performed in the theatre. The two local doctors performed the surgery, whilst each of us students were given roles such as 'assistant surgeon, anaesthetist, paediatrician and midwife.' Our collective role was to perform spinal anaesthesia under close supervision, monitor the patient throughout the procedure, and resuscitate the baby if required. Thankfully, both mum and baby survived the operation, with little need for dramatic intervention.

After each delivery we often had to repair first, second and third degree perineal tears. The culture of the Solomon Islands is that mothers have to 'suffer for their baby'.

My first delivery was at 2am. The mother had a third degree tear, and the midwife assisting me refused to let me give local anaesthesia. 30 to 40 minutes and 45 sutures later, we were finished. I felt well and truly out of my depth, and was extremely upset about the pain I had been forced to inflict upon this lady.

After this traumatic experience, my colleagues and I agreed to insist on local anaesthesia if we were asked to suture. Whilst the experience was extremely confronting, it is a clinical skill I'm unlikely to practice again unless I become an Obstetrics and Gynaecology registrar. On top of appreciating how incredibly tough these people are, it's so humbling to realise how lucky we are at home. It's astonishing to think a final year medical student was the best person to suture up a deep tear at this Hospital.

As confronting as the above experiences were, all of the ladies and babies ultimately had good outcomes. Unfortunately, the same can't be said for all the patients in KiraKira Hospital, a reality that will forever haunt me.

We were involved in an extremely upsetting incident, whereby we were unable to resuscitate a 26 year old male with likely cerebral malaria. Basic equipment such as a defibrillator and resuscitation drugs were unavailable, and airway devices weren't accessible as they were locked in the surgical theatre.

A family of fifteen people watched on as we attempted to perform advanced life support, making it an even more emotional and traumatic experience. Even after debriefing as a group, I struggled to accept the inequality between the resources we have available to us in Australia compared to the Solomon Islands. It felt so wrong to think that every gym and shopping centre in Australia has a defibrillator, whilst not even a hospital providing emergency care to 40,000 people in the Makira-Ulawa province had this simple but potentially life-saving device.

The approach to helping this community ultimately comes with a three prong approach. Health is an extremely important factor, but elements such as education and infrastructure are just as important and definitely overlap. During my placement we visited the local school and attempted to educate the local children on various primary health issues. The culture in the Solomon Islands tends to divide females and males, both in the hospital and schooling systems. My female colleagues taught the girls about feminine hygiene, sexual health and family planning. Myself and my male colleague talked to the boys about alcohol, smoking and betel nuts. Betel nut is a huge issue, and despite being a known cause of oral cancer and dental disease, is heavily ingrained in the culture of the Solomon Islanders. It's easily accessible on every street, and very cheap. Some people even use betel nut to brush their teeth!

When I chose to undertake my elective in such a remote and resource limited area, I hoped that such an experience would help me grow on a professional and personal level. I hadn't had much exposure to developing countries, so this placement gave me an opportunity to see firsthand the daily hardships and challenges faced by too many of our world's population today. Now looking back and reflecting on my experience, my time in KiraKira gave me everything I had hoped for and more.

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Auscultating one year old Joslyn on our paediatric ward round.

The student group with some school kids at the KiraKira School where we assisted with some teaching.

I was incredibly humbled after going on this trip, and it made me so much more confident in my clinical reasoning, communication and procedural skills. I felt a strong sense of responsibility for every patient I saw, and as such I was better able to recall information and make informed decisions by linking it to a particular clinical scenario or patient.

I learnt how to better communicate within our team of medical students, doctors and nurses. For difficult presentations we would often seek each other's opinions, collectively formulating the best management plan for our patients and their families.

Although I hope Bond University's involvement with KiraKira Hospital has improved health outcomes in the Makira-Ulawa province, there is still a lot of work to do.

Primary health care facilities are almost non-existent meaning that patients regularly present with advanced illness or disease, most of which would be entirely preventable or easily managed in Australia. Outreach programs in cardiovascular risk management, breast/cervical cancer screening, routine antenatal management and anti-malarial prophylaxis need to be implemented to address this disparity.

Specialist services are equally limited as the Hospital only has visiting specialists for a few weeks of the year. The situation isn't much better in the country's main referral hospital, Honiara, where there is a three week waiting list for emergency surgical procedures. There needs to be more exploration of initiatives such as telehealth and the figure1 app, as well as negotiation with "Doctor's Abroad" organisations or Australia's rural and remote health workforce to obtain a more steady stream of visiting specialists.

Available resources remain minimal, with no access to basic monitoring equipment such as ECG monitoring or oxygen saturation probes. Investigation of patients is limited to USS, x-ray, full blood counts and blood films. Their management is restricted by dwindling supplies of pharmaceuticals and lack of equipment needed for intubation, ventilation and resuscitation. There needs to be a program whereby old medical supplies are donated to KiraKira, but for the Hospital to fully benefit from this we need to ensure education of the existing staff on their use and applications.

Social and cultural factors also contribute to the poorer health outcomes, with activities such as smoking, drinking, betel nut chewing and unprotected sex commonly practiced within these communities. Domestic violence is almost accepted as the norm, and accounted for a number of our emergency presentations. As discussed previously, education of the Makira-Ulawa people is key in improving their physical and mental health.

This experience ultimately made me realise why I began studying medicine in the first place. A huge difference can be made with the most basic first aid, a little bit of knowledge and simple, well meaning conversation. I greatly look forward to returning to KiraKira Hospital in the not so distant future, with what I hope will be a wider knowledge base and skill set so I can better influence the health outcomes of the beautiful people of KiraKira.

I returned to Australia wanting to give back to a community that despite having so little, gave me more than I could ever have imagined. Although a seemingly small contribution, the provision of a defibrillator and alcohol hand wash for every ward using MIGA's Medical Support Grant will make a world of difference, to a world so different, but so similar to our own.

I would like to give a huge thank you to MIGA for giving me this life changing opportunity. The funds from the Medical Support Grant will make a huge difference to the community in KiraKira and the surrounding areas in Makira-Ulawa Province. I cannot recommend this elective highly enough for final year medical students!