

Vaiola Hospital, Kingdom of Tonga

Andrew Dent Scholarship Report

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In January 2023, I was fortunate enough to spend 2 weeks with a fellow medical student on a clinical elective at Vaiola Hospital in the Kingdom of Tonga. Situated near the capital, Nuku'alofa on Tongatapu, Vaiola Hospital is the largest hospital and serves as the Kingdom's main referral centre for the neighboring islands and regional health clinics. The hospital comprises of approximately 200 beds, with 6 main wards (O&G, pediatrics, psychiatric, general medical and general surgical) along with an ED and 3 operating theatres and a small ICU. The hospital receives funding from numerous countries including Australia, New Zealand, Japan and more. Health care is free for all Tongan citizens and includes dental coverage. Tonga itself is a beautiful country with widespread greenery, impressive beaches and exceptionally friendly and accommodating people.



Main Entrance to Vaiola Hospital

General Medicine

I began my placement in the medical ward, with the team of Internal Medicine doctors. When you initially enter, you'd notice how quiet the ward is compared to a typical medical ward in any metropolitan Australian hospital. Indeed, you are told that there's no rush - everything that needed to happen or be done would eventually be completed. The staff are relaxed, the patients are relaxed (even with serious health crises) and their family is relaxed. The day would start with a paper round to discuss overnight issues, new admissions and expected patients. Luckily, many Tongans were taught English during their schooling - particularly the younger generation - so there wasn't a significant language barrier as we initially perceived. The ward round would continue for most of the morning. The consultants are present almost every day and generally run the round. Interns are expected to cannulate and take bloods and unsurprisingly become very proficient in that skill! There were no butterfly needles so a syringe and needle tip would have to make do and you can't rely on an ultrasound to assist you in finding appropriate veins. Additionally, all medical notes had to be written in English to ensure there were no communication errors, however, this would significantly increase the amount of administrative work left to the residents. It was also impressive how some of the

doctors who did their medical schooling in Cuba and had to learn Spanish were having to translate medical terminology to English for the medical notes and then to Tongan to communicate (sometimes critical health information) with their patients. Some kept their Spanish medical textbooks to refer to at times! We joined in some community outreach sessions which involved traveling to regional clinics, often called 'Hypertension' clinics as this was the most common condition treated there. There are very limited GPs in Tonga (possibly countable on one hand) who may charge private fees or have limited working hours, which make it unfeasible for most.

Many patients admitted to the medical ward had an ongoing infectious process such as sepsis, pneumonia, urosepsis and the odd rheumatic fever. There has been a decline in communicable diseases such as TB and dengue over the years, however, COVID-19 has been a rising concern more recently. It was observed that often patients presented late in the disease process, usually waiting until they were critically ill before going to the hospital. The rise of antibiotic resistance is a growing concern – many simple infections (viral too) were treated with a course of antibiotics, one of the doctors also mentioned that patients would give unused antibiotics like Bactrim to friends and family to save a trip to the hospital. This is problematic particularly due to the limited amount of antibiotics available in Tonga which often get donated to the hospital! During my placement, they ran out of amoxicillin and had to substitute it with Augmentin. Rates of MRSA are steadily increasing with a few cases of community-acquired MRSA emerging – supply of vancomycin and meropenem is very limited and reserved only for those with life-threatening sepsis.

Tonga has a rising number of non-communicable diseases in the population often stemming from complications of T2DM and HTN such as ischaemic heart disease, stroke and end-stage renal failure. Again, many patients presented late, and often these complications occurred due to poor preventative health check-ups and maintenance. This is an increasing issue in Tonga, with complex cultural and socio-economic factors involved. Due to the lack of complex diagnostic equipment, there was a greater emphasis on history and clinical examination and tests ordered had to be reasoned and valid, unlike in Australia where it is sometimes common to order a flurry of tests to include or exclude a certain diagnosis. The radiology department only had 1 CT with a single consultant radiologist to

interpret it. There is no MRI. Patients presenting with ischaemic stroke are not always able to receive thrombolysis or anticoagulation without the CTB, and often miss out on that critical treatment window. Patients with ESRF do not have access to dialysis unless they travel overseas. As such, it is an unfortunate reality that people suffer critical sequelae and/or death as a result of these inequities.



On a Visit to Kolonga Health Clinic. R: Dr Ta'ofi Lolo L: Abram Poznanski



Village Health Centre

General Surgery

I spent my final week with the general surgery team, led by Lord Viliami Tangi and Dr. Alamea 'Aholelei. The day would usually start with a handover at 0730 then a consultant ward round. Since there were only 3 theatres, operating days were limited to Tuesday and Thursday. In Tonga, the general surgeons truly live up to their name: In a typical day, you would be seeing cholecystectomies, appendectomies, ORIFs, debridement, amputations, and the occasional trauma surgery – impressively all performed by the same surgeon! There were very limited surgical specialties available as often overseas surgeons would rotate through the hospital. An example of this is the Australian-funded Open Heart International organisation that provides life-saving cardiac surgery such as valve replacement, often to patients with Rheumatic Heart Disease. Unfortunately, due to the impacts of



Theatre 1 appearing quite modern.

COVID, this vital service has not been operating for the past 2 years, leaving a backlog of patients, some of whom unfortunately passed away due to complications. Additionally, all patients who required a transfusion or were pre-operative required family to donate blood since there is no blood bank. There's only a limited supply of overseas donated Rh-negative type O blood, reserved for critical cases.

A larger proportion of surgical admissions were for diabetic foot sepsis requiring either debridement or amputation, again due to the rising incidence of T2DM in the Tongan population, compounded by poor foot care. Osteomyelitis was common in the paediatric population, I distinctly remember seeing a 12-year-old boy in the pre-op clinic presenting with severe chronic tibial OM, which resulted in several sinus tracts forming from skin to bone. It was disheartening to hear that this was the first time he was taken to the hospital, after developing this over 2 years ago. Again, complex cultural and socio-economic factors including over-reliance on traditional medications influenced this outcome. Fortunately, his prognosis was favourable with no amputation needed, and his condition was able to be managed with debridement and long-term antibiotics.



FBD aspiration (50c coin)

The general surgery staff are experts in improvisation and versatility – in the wards, nursing staff prepare high-protein diets themselves consisting of raw egg whites with milk powder. Old bottles of saline are used as traction to realign bones after a fracture. Power outages were not uncommon – one happened when I was in theatre where the ENT surgeon was attempting to remove a coin from a 12-month-old baby's larynx. They did not have appropriately sized forceps so were already improvising with tools reserved for laparoscopic surgery, then the power went out. We were in darkness for around a minute, waiting for the generators to turn on with the surgeon steadily holding the forceps throughout. Luckily the newly donated ventilators were able to function on battery power.



Preparing to scrub for theatre 3 nicknamed the 'sepsis' theatre as it's reserved patients needing debridement, revision, or amputation as a result from diabetic foot sepsis.

Final Reflections

Overall, my medical elective at Vaiola Hospital has been an eye-opening and invaluable learning experience that allowed me to gain insight into the Tongan healthcare system and develop an understanding of the challenges they currently face. It was incredibly rewarding engaging with local patients, all of whom were stoic but able to find humour in even the direst of situations. I would like to thank the Andrew Dent Scholarship Fund for making this elective possible and express my gratitude to the doctors at Vaiola Hospital who were passionate mentors. I will definitely be visiting again in the future!



Last day with (L-R) fellow medical student Yang Chen, ophthalmologist Dr Duke Mataka and myself.