

Claire Lissaman.

Andrew Dent Student Elective Scholarship Report.

The Kingdom of Tonga is made up of 176 islands, 52 of which are inhabited by a population of 103 000. The islands are spread across 700 000 square kilometres of the Pacific Ocean directly north of NZ, separated into five island groupings.

The capital is Nuku'alofa, on the island of Tongatapu. Vaiola hospital is a 199 bed hospital with medical, surgical, paediatric and obstetric wards as well as emergency, out-patient, psychiatric and dental departments. Health care, including medication, is free in Tonga.

I began my four weeks in the Medical Ward, headed by general physician, Dr Sione Latu. I was starting the same day as the new lot of interns so I didn't feel alone in being slightly bewildered. The team was very welcoming though quite busy and I found I got a lot from shadowing the interns who took the time to talk through their thinking and get input for their management plans. We would also take turns with cannulae and bloods so I got some good practice there though the different equipment and frequent improvising challenged my dexterity. The highlight of the day was the ward round – initially a 'paper round' where all the patients, their progress and latest findings were



discussed at the doctors station and then we would go to see each patient. Dr Latu was generous with his teaching and though gentle, certainly expected an good understanding of pathophysiology as well as practical knowledge. I think I was lucky his focus was bringing the new interns up to speed! Despite the fact that there were certainly some sad situations and stressful decisions to be made, I have never been on a ward with so much laughter and comradery.

Communicable diseases take up a large number of beds (though these are often on a background of an NCD like diabetes or COPD), with the majority being dengue, pneumonia and skin or urosepsis with the odd case of TB. The other large group of patients are admitted for the non-infectious complications of diabetes and hypertension – end-stage kidney disease, acute coronary syndromes, congestive cardiac failure and strokes. Seeing the number of people seriously ill or die of their diabetic complications is of course a swayed perspective of being on the medical ward of the country's major hospital, but with frequently uncontrolled blood sugar levels and no dialysis on the island, it is a reality for many. Dr Latu explained they had recently investigated setting up dialysis in Tonga and estimated it would cost \$3 million annually. However the total health budget in Tonga is \$20 million. They believed about 50-60 Tongans a year would access this service and it would give them perhaps two years of life more. Some pretty devastating realities to come to terms with but it is no surprise the money is instead spent on preventative medicine. The NCD clinics have been running nationally for a few years and anecdotally the medical teams believe they are making a difference. Unfortunately clinical attendance and adherence to medications often occurs because of the onset of symptomatic complications rather than before. Tongan adults are also the most

overweight and obese in the world¹ and this is naturally a battle and source of frustration for their treating teams.

On a political note, while I was there the Abbott government announced it was cutting AusAid funding to Tonga. The majority of younger Tongan doctors have trained at the Fiji School of Medicine through a Tongan government scheme funded by AusAid that means they are bonded to return and work in Tonga. Other recent AusAid projects have been Tonga's first mammography machine and the training of specialist nurses for the NCD clinics. As such, the hospital staff were very concerned at what a cut in funding might mean for the hospital and healthcare in Tonga generally.

I had planned to split my time between Medicine and ED and so in my second week I moved downstairs to the 9-bed emergency department which runs adjacent to the out-patients department. Out-patients takes the role of general practice in Tonga. There are government-run (and therefore also free) clinics in some villages though many people prefer to make the trip to the capital where they are triaged and sent to either OP or ED as required.

The ED is staffed by one doctor, a specialist nurse practitioner and one or two general nurses. I generally attended whichever shift the head-of-department Dr Matamoana Tupou was working as she was very willing and supportive in her teaching and supervision. I gained confidence in history taking (the majority of patients speak good English) and examinations and with time was able to make an assessment, order investigations and write a plan with the support and kindly targeted questioning of Moana and the senior nurses there each step of the way. As my elective was before my paediatrics term I largely saw the adult patients though also had an excellent introduction to paediatric medicine in shadowing the staff and followed their guidance in eliciting signs in children.



There were a few presentations I had never come across – centipede bites, ciguatera poisoning, stonefish stings and plenty of what I now expected after my time on the med ward – dengue fever, cellulitis, pneumonia, abscesses and boils, osteomyelitis, septic arthritis and gastroenteritis. Lacerations are also a common presentation – head's opened by children diving, feet opened by broken bottles or hands by the machetes used to cut coconuts - and this gave me a few opportunities to suture.

Unfortunately I spent some of my third week as a patient rather than medical student. After seeing so many patients with Dengue I was using plenty of mosquito repellent though not completely managing to avoid bites. After 24 hours of spiking fevers and chills, body aches, a mild sore throat and a headache, I was sufficiently paranoid to present to the outpatient's clinic. The bloods for Dengue were negative and a clinical diagnosis of tonsillitis was made. After 24 hours of antibiotics my only complaint was my increasingly sore throat but I was grateful it was nothing worse.

Once recovered I travelled to Vava'u, a group of 61 islands 300km north of Tongatapu, to spend a

¹[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(14\)60460-8/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)60460-8/fulltext)

week on the medical ward there. It is a major tourist centre from June to Nov when the humpback whales calf there but is stunningly beautiful year round – endless coves and harbours with beaches, bush and crystal clear turquoise water.

Neiafu, the main town on Vava'u island itself is home to Prince Ngu Hospital which serves a population of about 15000. The hospital has 43 beds though generally around 8-10 are in use at any one time and the majority of patients are instead in the outpatient clinics including the NCD clinic. The buildings are in bad repair,



they are understaffed especially at a senior medical level and are frequently short of many basics – I never saw hand sanitiser though there are basins in the hallways that *usually* have soap. There is no anaesthetist or anaesthetics machine there so only procedures with epidural or ketamine can be performed eg caesarean section and apparently below knee amputations.

Though I thought I would remain in the medical ward, I quickly realised that it is the same two PGY3 doctors that run this as well as the surgical, paediatric and obstetric wards, the NCD clinics and support the other 1-2 doctors in outpatients. As such I got to see a bit of everything. In Vava'u I was more acutely aware of cultural and language differences and experienced that anxiety-provoking sense of disorganisation that occurs when you don't speak the language and can't see the whole picture.

The first case of Dengue was only diagnosed in Vava'u in Dec 2014 and by the week I was there (the end of January) almost half the admissions were Dengue cases. The true number of cases is hard to ascertain though – dengue reagent was already out of stock with serious cases having bloods sent to Australia. However the majority of cases of suspected dengue in Vava'u and Tongatapu were seen in outpatients, given paracetamol and told to return if they are unable to maintain their fluid intake or had any bleeding. I felt I got quite good at a clinical Dengue diagnosis and assessment of severity though I never the saw a dengue rash. About a week after I left a state of public health emergency was declared after 85 cases were reported in just Tongatapu in one week.

Cancer management was an area with significantly different management to those in Australia. There is no chemotherapy or radiotherapy in Tonga and so only cancers that present early enough and are appropriate to manage surgically are able to be treated with curative intent. One unfortunate patient with metastatic melanoma went through repeated attempts at a thoracentesis as there wasn't a long enough needle available. Multiple punctures were required to find just the right location, angle and patient positioning to allow drainage. An IV line then became an improvised drain and she went home the next day with significantly improved breathing.



On return to Tongatapu I did another couple of shifts in ED though I've made it sound like I never left the hospital. In reality I spent my

evenings swimming and snorkeling and my weekends on uninhabited coral islands eating papaya and coconuts or biking around the island to caves, bush walks, archaeological sites and impressive blowholes. I also made some good friends both with locals and expats who invited me into their homes, shared meals, and took me to their favourite beaches.

I would like to thank the Andrew Dent Scholarship Fund and St Vincent's Pacific Health Fund committee as well as Melbourne University Global Mobility for supporting my elective in Tonga. I feel very privileged to have spent a month in such a beautiful location with the teaching and guidance of doctors and nurses who are passionate about the health of their people and shared with me their excellent clinical diagnostic skills and pragmatic decision-making. I am also grateful to the patients who were accommodating of my lack of Tongan and generous with their time and stories.

A very memorable moment that sums up so many of the experiences of medicine in Tonga was after a JMO had unsuccessfully tried to remove a foreign body from the ear of a 3 year old, the newly appointed Minister of Health, who happened to be visiting the hospital in Vava'u for a few days (and who is a surgeon) donned scrubs and took off his thongs to enter the operating theatre and proceeded, without anaesthetic or sedation, to remove the ball bearing from the ear of the screaming boy while he was held still by three adults. Whenever I approached he screamed even louder though I saw him a few hours later in clinic and he grinned at me and said 'bye palangi'.

Description of photos:

1. Emergency department doctors, nurses and paramedic, Vaiola Hospital, Nuku'alofa.
2. New buildings of Vaiola Hospital, Nuku'alofa, Tongatapu. Completed in 2012.
3. Prince Ngu Hospital, Vava'u.
4. A quiet day in the surgical ward, Prince Ngu Hospital, Vava'u.
5. Doctors working on the medical ward – L to R, Doctors Sione Latu, Sisi, Tusinga, Loutoa, Saia.
6. Working hard at the weekend, Nuku, Vava'u island group.

