

2013 Tonga Trip Reports

1. ELLIOT ANDERSON

On the 15th of June 2013, I exited the jumbo jet and took my first steps in the Kingdom of Tonga. This marked the start of a 16-day adventure that I now count as one of the best experiences in my life. As part of the 2013 Team:Med Tonga delegation, we spent the majority of our time on the North island of Vava'u. There we divided our time between undertaking free community health checks and working with the doctors and staff of the Prince Wellington Ngu Hospital.

The hospital was an old sprawling collection of buildings on top of a hillside overlooking the village. One of my main reasons for volunteering for this trip was my desire to gain a better understanding of health care outside of Australia and by spending time in the local hospital I was able to achieve this goal. I was impressed by the resourcefulness and efficiency of the staff that were working with very limited resources. One of my favourite memories of the time that I spent within the hospital was when Fleur Muirhead and I assisted with a below knee amputation. The patient was a known diabetic who had cut her foot six months ago and the wound had never healed. Because diabetes encumbers normal wound healing and promotes infection it had become a pus filled necrotic mess that was threatening to turn gangrenous. Due to limited resources the only viable option was to operate. I remember seeing the women being brought into the operating theatre with a look of absolute terror on her face. She had never been to a hospital before in her life and now she was having her leg removed. Upon seeing how scared this women was, the surgeon and staff in the operating theatre began singing, in unison, local church hymns. Almost immediately the women relaxed and when she finally slipped into unconsciousness from the anaesthetic, there was a smile on her face. To me this really highlighted the innate compassion that existed within that hospital. Of course they were singing when she woke up out of her anaesthesia as well.

The other component of our trip was to offer free health assessments on the main street of Naifu. This was hugely successful surpassing even our own expectations in terms of uptake and value. Altogether we screened 400-500 people for diabetes and hypertension (high blood pressure). Of those screened we were able to identify a number of people who required and would benefit from prompt medical treatment. We had brought with us a number of educational pamphlets that were written in Tongan and with these we were able to dispel some of the myths that were plaguing the community. One of the major causes of the extremely high prevalence of diabetes within Tonga is a general lack of understanding. With each person we tested we tried to address this deficiency in education in order to hopefully have a longer-term effect on the whole community.

One of the key factors of why our trip was so successful and personally fulfilling was the donations that we recieved. This allowed us to achieve our goals and really make a difference to the diabetes health crises that is crippling the Tongan medical system. With the money we raised we were able to purchase;

- 11 glucometers
- 4000 glucometer strips and lancets

- 7 sphygmomanometers
- 7 stethoscopes
- Print 200 colour brochures
- Ship 80kg worth of hospital donations to the Prince Wellington Ngu Hospital

These donations have made a very real difference to the quality of health care that is available on the Tongan island of Vava'u.

2. ANDREW LONG

The highlight of my trip was assisting at an outreach clinic at a peripheral and poor village on the island. This clinic is run on a weekly basis at different villages around the island, normally by one doctor and a few nurses to handle prescriptions. Along with Olivia Wells, I attended this clinic and was able to talk to patients about their current medical problems, write up their prescriptions and offer advice on treating their current medical conditions. This clinic is a crucial part of healthcare on the island as many patients are too poor or immobile to get transport into the hospital in Neiafu.

This clinic required us to take medical supplies away from the hospital; including a glucometer, sphygmomanometer, thermometer, syringes, needles and various medications. Strikingly, many of these were the only supplies that the hospital had, so while we were using them, there were none at the hospital. This lack of supplies is a detriment to patient care and the ability of the medical staff to diagnose and treat.

Although Prince Wellington Ngu Hospital was well-built and the doctors were well-trained, the significant lack of resources was alarming. It seemed that supplies being used were one of the few remaining, and many of the large and expensive pieces of equipment were broken and could not be repaired without funding, or were unaffordable in the first place. The most noteworthy of these was the lack of an ultrasound machine.

Ultrasound is vital in the management of heart conditions, diagnosis of abdominal conditions like appendicitis, and in the antenatal care of expectant mothers. Without ultrasound, many decisions have to be made through "guesswork", obviously leading to a lesser quality of medical care. As a good medical investigative technique that is highly accessible and cheap in Australia, ultrasound is often taken for granted. This would be a valuable asset to the hospital.

TeamMed sent us to Tonga primarily to help tackle the issue of type 2 diabetes. It is estimated that over 1 in 5 of the Tongan population are diabetic, and at least 30% of these are currently undiagnosed. Before our trip, I had hypothesised that the Tongan population were unaware of the risk factors for developing diabetes, the importance of a healthy diet and exercise, and the consequences of the disease. However, during my experience I found that the people were becoming very aware of the importance of diabetes among their community, perhaps through the work of the Tongan Government

and many other volunteer services like our own. School-aged children and young adults were very active, competing in a variety of sporting events after school, and would exercise by walking around town on a regular basis. However, there was a lack of knowledge of what a healthy diet consists of. Most Tongans got by on root vegetables and pork as their staple meal, with the children snacking on instant noodles when they were hungry. This diet is lacking in essential vitamins and minerals, and is far too high in carbohydrates and saturated fats. This issue is perhaps compounded by the cost of healthy foods, low wages, and very large family sizes.

Diabetes is a chronic disease, and management with a healthy lifestyle is vital in reducing the number and severity of its complications. Tight control of blood glucose levels is essential. However, tight control is reliant on constant surveillance by the patient in the form of constant pinprick blood sugar checks. This is out of the budget for many Tongans living with diabetes, and therefore they check their blood glucose level rarely. Naturally this leads to poor control and inevitable complications.

3. Fleur Muirhead

I had an incredible time on our TeamMed trip. We had a great team and formed a good bond, which made our goals straight forward and more attainable.

We spent most mornings in the Prince Wellington Ngu Hospital in Neiafu. It was a bit of a medical culture shock walking into the building. It is so far from a westernised Australian hospital with pristine white walls and the smell of cleaning products. This place had all the windows open, no mosquito nets, very basic supplies (especially pain killers) and even some parts of the roof looked a little suspect. The staff however, were wonderful. They were excited to have us, spoke English on ward rounds so that we knew what was happening and shared their experiences with us.

Our role in the hospital was very simple. We would learn on ward rounds and assist where we could. The assistance mostly included inserting intravenous lines and helping to examine the patients. My highlight in the hospital was the third morning when I saw my first birth. I went to assist in the labour ward with Elliot Anderson and got there with enough time to experience a life coming into this world. It was a really special moment for me and one I won't be forgetting easily.

The second part of our trip involved taking donations to give to the hospital. This was a really successful element. The donations we raised enabled us to buy so many supplies for such a small hospital in need. The smile on their faces as they hung a new stethoscope around their necks, was priceless. It felt like Christmas, even for us as the donors.

The part I found most rewarding about the trip was performing public health checks in the main street of the township. The Tongan people were very receptive and eager to check that their health was on track. We found a small number of people who needed to get their blood sugar levels sorted out immediately and a large portion of borderline levels. The best thing about performing the check on the locals and finding such results was that we were able to give them the tools to get the problem resolved. It was a bit

daunting knowing that some people will probably be diagnosed with diabetes however we had helped them to get on track sooner and hopefully prevent any further complications so often seen in the Tongan population such as diabetic wounds and amputations.

It was a fantastic two weeks and I would recommend it to anyone studying medicine at Monash. It was very eye opening and at times somewhat confronting. It did however, leave me with a feeling of joy and having accomplished something positive for a small community.

4. Olivia Wells.

The hospital had only a single, now discontinued model, glucometer to service the entire island. Diabetic locals had their blood glucose levels checked only once each month, a shock to my cousin who is diabetic and checks her levels 6-8 times each day. This makes it difficult to truly assess the condition of a diabetic patient as blood sugar level are not regularly monitored and averaged over the day but is almost random and dependent on the food intake of the patient in the preceding hours. The additional glucometers we donated will be used so the hospital have multiple devices (meaning the clinic in Neiafu doesn't need to shut down because the rural outreach clinic is operating and has borrowed the glucometer) and to be distributed by the hospital and Australian GP on the island to diabetics who are capable and would benefit from self monitoring of their condition. Something as simple as being able to provide the means for a small number of patients to self-monitor really has helped the community. Not only do some patients now get to monitor their condition as any average Australian diabetic take for granted, but the process of self-checking and perhaps observing the immediate effect certain foods and activities have on blood sugar also help raise awareness of the condition among family and friends. We hope that this may ultimately help lead to a decrease in incidence of the disease and also the secondary complications that arise too often in the Tongan community.

As a team, on 3 of the afternoons we conducted free diabetes screening on the main street of Neiafu. We believe we tested between 400 and 500 for hypertension and diabetes. The response to our little table was overwhelming, and certainly surprised me. There were times we were inundated with locals who had been tested and returned home with a van full of their families and friends. The most difficult part of this for me personally was informing those who had blood sugar levels strongly indicative of diabetes. There is a great fear of testing among the community in regards to diabetes and for these people to get tested took some courage. It felt especially deflating to tell these people that their fears were correct. Those who had returned normal blood sugar levels were quick to tell their families and friends it wasn't as painful as expected and they would be fine too, but those who had come to us willingly to be told bad news would return home with a terrible story to tell family and friends and perpetuate the fear in the community that surrounds testing.

While we were able to bring a large amount of supplies and achieve much with the donations we received, there is still so much to do in Neiafu. Those with glucometers will

continue to require strips for the machines to be useful and we also hope to set up a larger number of patients with the means to self-monitor in the future.