

Elective to Samoa

1) What are the common general/surgical orthopaedic conditions in Samoa? How do they differ from the UK?

Over the few weeks I have spent in Samoa, the most common diseases that I have encountered have been by far diabetes and hypertension. Due to their high prevalence they appear to cause the vast majority of morbidity and mortality in this country and their prevalence is also reflected in the types of surgeries performed here.

One of the most common types of surgeries I saw performed was for diabetic foot sepsis (DFS). The patient would most often have had long-standing, uncontrolled type two diabetes for a number of years that has gradually restricted the blood supply to one or both of the patient's lower extremities. Due to ischaemia of the foot it is usually only a matter of time before necrosis and sepsis will set in. Unfortunately in Samoan culture there is much taboo surrounding amputation to remove all the diseased foot and so most patients instead opt for general clearance of the area with debridement of the necrosed areas only and a peroxide washout to try and sterilize the area from bacteria. This often will help in removing the focus of the sepsis but is often only a temporary solution as the remaining ischaemic foot will gradually necrose, become septic and the process will sadly repeat itself.

Other surgeries I witnessed in Samoa mirror any general surgical ward in a district hospital in UK. Common procedures included appendectomies, cholecystectomies and hernia repairs. Much of the equipment used in these surgeries is reusable such as most of the surgical equipment and also the sterile drapes that are often washed between surgeries.

The vast majority of orthopaedic cases that presented to the A&E were frequently very young men, often in their 20s. The majority of the mechanism of injury behind these injuries seem to be either rugby related or due to alcohol that has apparently over the years become more of a problem. Surgeries included repairs of broken forearms, hands and stabilization of jaws. The threshold for an orthopedic surgical referral in Samoa appears substantially higher than in UK. Many patients would be imaged with X-rays when they enter A&E and this image may only be assessed by A&E. If the fracture was hairline or only mildly displaced the patient would have the arm placed in a cast in A&E with no further orthopedic management.

2) How is surgical healthcare delivered and how does it complement / contrast to healthcare in the rest of Oceania and UK?

Samoa is made up of two main islands, Savai'i and Upolu, separated by a 2 hour ferry ride. The vast majority of the population lives in Upolu spread out around the coastal areas of the island, with a slightly higher density around the capital, Apia. The main hospital for the whole of Samoa, Tupua Tamasese Hospital is located here. There are various district hospitals dotted around each island but Tupua Tamasese is by far the largest and most advanced and acts as the central administrator of all the other hospitals.

There is tremendous interconnectivity between all the hospitals, some of which are so small they are often just a few rooms for clinics. Many of the doctors work in Tupua Tamasese Hospital and take a couple of days a week to work in the more rural areas of Upolu, or take a few days to work in Savai'i

The vast majority of the district hospitals have no imaging available and all blood results taken usually have to be taken to Apia to be processed. Travel can be quite expensive for Samoans and the commuting distances, even to the nearest district hospital can be many hours walking or waiting for buses that frequently don't even turn up. Much thought is taken to decide whether it is absolutely necessary that a patient requires going to the larger hospital in Apia for further tests. Each blood test and imaging ordered is also assessed whether it is financially justified.

There is unfortunately currently no oncological treatment or cardiac surgery in Samoa at present. On the general and surgical wards there are a great many patients, some as young as 11 years old, who are suffering with heart failure due to rheumatic heart disease. These patients are constantly monitored clinically and with chest x-rays and heart echo to determine when and if they may qualify to go to New Zealand to undergo valve replacement surgery. Other surgical conditions that may require the 5 hour flight to New Zealand include many oncological surgeries and vascular surgeries such as repair of aortic dissection.

The financing of medicine in Samoa is similar to that of UK. There is a National Health Service here too that provides services to the whole population free of charge. There are some flat charges for imaging such as CT scans and charges for prescriptions that are very low cost (approximately \$2) but even this may be off putting for some patients.

3) Learn about the epidemiology of diabetes and management of its surgical and general complications comparing and contrasting this with UK

Diabetes in Samoa is very common and affects approximately 9 – 13% of the population. The prevalence of this condition and the constant need to educate and improve management of diabetes for the patients is witnessed in almost every hospital ward, A&E and outpatient clinic. The great prevalence of diabetes in Samoa is a complicated issue. Many of the doctors here point to a diet high in taro, a root vegetable packed with carbohydrate, a high fat diet and much less exercise than previous Samoan generations.

There are no GPs or diabeticians in Samoa as in UK so organizing management usually falls to the doctor on call in outpatients or whoever is running the rural clinic. Management begins similarly to

UK with attempts at diet control, increase exercise and metformin. Monitoring however is performed much less frequently and by RBG alone. Hba1c is very rarely undertaken due to expense. Insulin is also less frequently prescribed as it is injected. Many Samoans feel this is too unnatural and possibly that it clashes too much with their conservative culture. There may also be a lack of fridges, particularly in rural parts of Savai'i that make giving insulin more complicated.

4) Reflection and discussion

I have thoroughly enjoyed my time in Samoa. Both doctors and patients are some of the friendliest people in the world. I have tried to get a brief glimpse of as many aspects of medicine and surgery here as possible such as in the rural hospitals, on wards and I have even been supervised taking clinic in outpatients and A&E.

My brief time here has taught me to consider the reason behind every test I order and the importance of education and early treatment. It has been particularly moving to see how much can be done on such a small budget and how no penny is wasted here in the health service. It is also particularly endearing to walk past the new hospital every day that will open next month that will hopefully solve many of the problems in the current hospital and have a great impact in improving the lives of people all over Samoa.