

Elective Report from Samoa

Objective 1: Describe the pattern of diabetes mellitus in Samoa in the last 10 years and compare this to the global pattern of disease.

The long-term effects of high blood sugar levels, such as kidney and cardiovascular disease, can become a large burden on country's health care system. For example, the World Health Organisation has estimated that between 2006 and 2015 China will lose over \$558 million treating strokes, heart disease and diabetes. The prevalence of diabetes is increasing worldwide and the World Health Organisation (WHO) has predicted that between 2005 and 2030 the number of people suffering from the illness will double (WHO 2011a). More than 220 million people have the disease worldwide (WHO 2011a) with over 80% of cases found in either poor or middle-income countries (WHO 2010).

Samoa consists of two main islands, Savaii and the more densely populated Upolu, with a total population of 183,204 (WHO 2011b). Non-communicable diseases are now the leading causes of death in Samoa. Their prevalence has doubled in the last ten years to 23.1%, an increase that is faster than the worldwide average. Alongside diabetes, there has also been a dramatic increase in cases of obesity (currently 57%) and hypertension (21.4%) (CHIPS 2010). The disease is more common in urban areas, with prevalence in Savaii being less (20.3%) than that in the capital Apia (27%). However, some predictions indicate that for every individual diagnosed clinically with the disease, three remain undiagnosed (CHIPS 2010).

Several interrelated factors account for the high levels of diabetes in Samoa. Obesity is the main cause, as is poor diet and lack of exercise. Studies have shown that 35.6% of the population eat virtually no fruit and in Apia alone at least 28% of the population fail to exercise regularly (CHIPS 2010). These findings are supported by the fact there is an increased rate of obesity in Samoans migrating from rural areas, to urban areas where the diet of a 'modern Samoan' consists of 'externally processed and purchased foods' that are 'high-fat, high-energy' (du Toit 2010). Samoa also has a relatively centralised health care system, low numbers of skilled medical staff and poor communication systems. The population is also poorly educated so measures to prevent obesity are limited.

Objective 2: Compare the chronic management of diabetes in Samoa to that in the UK.

When on an 'out reach' placement in Sanapoo, a rural village in Southern Samoa, I witnessed the chronic management of diabetes first hand. Villagers would attend a once-weekly clinic if they needed new medications from the general practitioner, the majority being metformin. All patients had their blood pressure taken by a nurse at each appointment, and their sugar levels were also taken using a blood monitoring stick device. Unfortunately, when we were at the clinic the only device the clinic had was broken so readings could not be taken. Unlike in the UK, there were no readily available resources to complete a urine dip analysis, and patients were not weighed routinely nor did they have their waist circumference measured. Each appointment was documented by

the doctor and prescriptions were taken to the next room where the pharmacist took 5 Tala (£1.30) for each script issued. Unfortunately the outreach clinics were limited to certain villagers, and due to difficulties with transport and funding, a large number of the population has limited access to healthcare resources.

In the UK, all diabetic medications are free of charge. When a patient is diagnosed by a doctor they are given full information about the disease, the management and the options for treatment. An annual review is carried out in the community often by a diabetic nurse, and yearly eye reviews are carried out by an ophthalmologist. Regular blood tests are also carried out to ensure the patient is on the correct medication and very often patients have a blood glucose kit in order to monitor blood sugar levels from home. It is a NICE standard that any urgent problems with patients feet are reviewed by a specialist within 24 hours (NICE 2009).

Samoa also lacks the resources to conduct regular health checks and for every person diagnosed with diabetes, another three go undiagnosed. Lack of health seeking behaviour is also a factor. In 2009, only 35% of the Samoan population had their blood checked, and only 44.9% of the population had their blood pressure checked. With such high levels of obesity, diabetes and hypertension in the general population it can be suggested that there is a much less effective monitoring and chronic management system in place in Samoa to that in the UK, but that the lack of funding and resources should be considered as restricting factors.

Objective 3: After one week of working in the hospital reflect on what you have learnt so far about your role and what could be improved. Over the next four weeks practice improving the identified areas of weakness.

During the first week of shadowing I tried to familiarise myself with the hospital. There was a morning ward round, led by a consultant, that met on the paediatric ward. From there the team went round to each patient writing in the notes and revising the management plan. Like in many hospitals I have worked in at medical school, it is the duty of the younger members of the team to fetch the notes, review observations and find investigation results. In Oceania Hospital, there were no computerised systems so everything was recorded on paper. Occasionally this led to problems, such as locating notes and finding X-Ray films.

After the ward round the team went to the outpatients department where there was a daily clinic. The main outpatient clinic consisted of urgent problems and patients were instructed to queue up outside in the corridor until they could be seen. The registrar in charge was often flooded with patients and final year medical students ended up reviewing patients, making decisions and writing prescriptions for children for the registrar to sign rather than them being seen by a doctor. Unfortunately, the medical students also had other commitments such as teaching and studying so they were not always readily available to help, so the registrar would be even more pushed for time.

After the first week, I decided that I was going to improve my participation within the team. I assisted with the admin tasks but avoided being put in the position of making medical decisions that I felt inexperienced to complete. By fetching notes and finding certain X-Rays some pressure was taken off the Samoan medical students. I also joined the medical students in the paediatric clinic and was able to assist the parents with tasks such as, washing the patients to 'cool them down', and freeing a medical student to review more patients. I was able to build a good rapport with the Samoan medical students and they were able to help me with my questions about the health care system and involved me with projects they were currently undertaking. I found that efforts to become an essential part of the team were limited because of my lack of experience. In Samoa, medical students take on far more responsibility and advanced tasks such as assisting in complex surgery than at home in the United Kingdom. I felt that it was important to not overstep my clinical limitations.

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