ELECTIVE (SSC5b) REPORT (1200 words)

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

Describe the pattern of diabetes mellitus in Rarotonga and discuss this in the context of global health.

The Cook Islands – as with nearly all of the other Pacific Islands – has a very high prevalence of diabetes; of which nearly all is type II diabetes mellitus. The most recent estimates from the World Health Organisation show that the Cook islands has the fourth highest prevalence of diabetes globally; indeed there is a prevalence of 21.5% of its population aged 20-79 at a significant social and financial cost (the cost of diabetes to the Cooks Islands Ministry of Health is sadly not readily available). Such a high prevalence of diabetes mellitus is in contrast to the UK where we currently have prevalence 6% - although it is steadily increasing – at a cost of $18.8 billion, a significant proportion of the NHS budget.

As stated above diabetes mellitus is not only a health epidemic in the Cook Islands but across the Pacific islands also. Although the absolute cost of diabetes to the Cook Islands Ministry of Health is uncertain the cost for referrals to New Zealand for diabetes alone was $213,000 in 2011 (at a cost of $888 per patient), representing 2% of the budget simply for their flights. Therefore the total cost of diabetes to the Ministry of Health is likely to represent a significant – and ever increasing – proportion of the total budget. The high prevalence of diabetes in the Cook Islands is intrinsically linked to the high prevalence of obesity and closely associated with its public health and a change in the national diet from healthy, traditional sources to high-calorie, low-nutrient western foods; with the prevalence of diabetes and obesity closely correlated to its introduction from World War 2 onwards.

Describe the pattern of health provision in Rarotonga/Cook Islands and contrast this with the UK.

Health care in the Cook Islands has both a private and public sector, with public health care predominantly provided through the Ministry of Health which also regulates health care provision across the Islands. The service in the Cook Islands is provided through the main 90 bed general hospital in Rarotonga with a walk in outpatient clinic; other outpatient clinics and child welfare centres are distributed around the island. Each of the outer islands has either a resident doctor or specialist nurse (with both present in Aitutaki; the island with second largest population), with referrals made to Rarotonga hospital for more serious or complex cases and the cost of the flight paid for by the Ministry of Health. The main hospital and outpatient clinics are reasonably well equipped given their level of funding; with general medical wards, obstetrics & gynaecology, surgery and paediatrics; the funding of which comes through both the government (the primary funder) and some overseas donors through foreign aid programmes (although this remains a relatively small and decreasing proportion of the total budget). The main significant difference to the UK is the available budget of $11 million NZD which equates to $755 per capita compared to the spending of £2,057 per capita in the UK. Therefore although the total budget for health spending is understandably small given the population of 8000 on Rarotonga the total spend per capita remains substantially lower than that in the UK.

The access to services is similar to the UK with the emergency department open 24 hours and outpatient clinics both within Rarotonga hospital and around the island open weekdays during working hours. The key contrast to the UK is that there is no general practice and all primary care

cases are treated through outpatients; which also functions as the accident and emergency in the hospital. This leads to large number of patients in the outpatient department although the target waiting time is still only 20 minutes. This model of a combined outpatient and emergency department functions reasonably well whilst the population and the number of doctors available to staff these departments remains small; however it would prove impossible if patient numbers increased.

Why does Rarotonga have the fourth highest level of obesity in the world and how is this managed with limited resources? How does this differ to the UK?

Such a high prevalence of diabetes in the Cook Islands is largely reflected in the high proportion of obesity with a recent study by the World Health Organisation, showing the Cook Islands to be the most obese nation globally. The WHO study estimates that 50% of the population are obese (defined by a BMI greater than 30) and 80% are overweight (BMI greater than 25). This is largely caused by a combination of environmental and genetic factors including: a decrease in local farming on the island, a decrease in physical activity (with 65% of the population physically inactive), the high cost of imported food from New Zealand and the low cost of readily available western style takeaway food in comparison. Indeed nearly 40% of the Pacific Islands region has been diagnosed with a non-communicable disease; predominantly hypertension, diabetes and cardiovascular disease. It is a widely held view that this increase in obesity and the associated non-communicable disease is due to a decrease in the consumption of the traditional Cook Island foods and locally grown fruits and vegetables; with health education in schools a significant challenge, especially with such a limited health spend per capita.

What clinical/communication skills have you developed/improved by practising medicine in a resource poor setting?

Practicing medicine in a resource poor setting has provided many challenges and learning opportunities. Nearly all patients are treated purely on clinical examination and judgement with the availability of investigations limited. Such an example is that the hospital does not have a CT scanner, therefore any head injury or suspected stroke is managed purely on clinical judgement and the most likely condition. Therefore although this allows for quick management in a resource poor setting, it sometimes leads to inappropriate or detrimental treatment.

Further this placement in Rarotonga hospital has done well to prepare me for work, as we were given the opportunity and responsibility to perform as junior doctors. This was both on the ward rounds and in outpatients. Throughout this elective patient we were able to clerk, order investigations, refer and provide the initial management for acutely unwell patients, especially on the general medical ward. An additional challenge to working in the Cook Islands is that of traditional Maori medicines and therapies. Although in the UK there are many different health beliefs we have to work with to reach an outcome for the patient, the health beliefs here are not only different to those I have encountered before but are also deeply engrained in their culture. This was particularly obvious in an ophthalmology clinic whereby patients who had sore of scratched eyes would present with damage to the cornea from herbal compacts. In many cases these had lead to significant corneal ulcers and in one case complete loss of the eye. This was largely problematic as the Maori therapies are usually taken long before attempting to seek a medical opinion in the hospital or outpatient clinic.