GENERAL MEDICINE

# Elective Report

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My original objectives were mainly focussed on the prevalence and management of diabetes in Belize. However, chronic diseases (including diabetes) are managed in a much more general way in Belize, and I have therefore changed my objectives accordingly.

## 1. Describe the pattern of disease in Belize and discuss this in the context of global health.

According to the WHO, the population of Belize is 312, 000, gross national income per capita is $6090, and average life expectancy is 71 for males and 76 for females. The UK population is around 62, 000, 000, with a gross national income per capita of $36,010 and an average life expectancy of 79 for males and 82 for females. The total expenditure on health as a percentage of GDP is also significantly lower in Belize than in the UK (5.7% compared with 9.3%). Western Regional Hospital is in Belmopan, the capital city of Belize. My placement in the Western Regional Hospital was relatively unstructured, and we were invited to attach ourselves to the departments in which we had greatest interest. I spent time in the Emergency Department and with the general medical team, mainly in clinics as the medical ward was very quiet during my time there. In the emergency department, the team dealt largely with trauma cases, including many road traffic accidents as well as things more unusual in the UK such as machete wounds. Patients seen in the general practice clinics also came to A&E if they required treatments only available in hospital. Most commonly, these were children with asthma requiring nebulised medications, or patients with gastrointestinal illnesses requiring intravenous fluids. In terms of long-term conditions, the main groups of patients I observed were those with diabetes, hypertension (both prevalent in similar numbers to the UK), chronic kidney disease and HIV. HIV is a particular problem in Belize, with a prevalence of around 1.5%, compared with a prevalence of around 0.15% in the UK. Smoking is significantly less common in Belize (3.9% of adults, compared with 17.3% in the UK), and as such deaths resulting from respiratory disease are also lower (4% compared with 8% in the UK). Belize does have an increasing problem with obesity, however, particularly in its female population.

## 2. How does provision of healthcare in Belize differ from that of the UK?

The national health system in Belize provides certain services for free and subsidises others. Patients can see a doctor for free, and most medications are provided free of charge. However, patients must pay as fee for investigations, elective operations and any admissions to hospital. Western Regional Hospital had limited facilities available in comparison with a major hospital in the UK. They were able to offer basic blood tests and x-rays, but had no other imaging available. There was an ultrasound scanner in the hospital, but no-one trained to operate it. A particular challenge for the healthcare professionals was the existence of private imaging clinics, some of which were more reliable than others. On several occasions, I observed doctors presented with ultrasound reports from clinics whose reliability they doubted, leaving them with the difficult decision of how to follow up any findings. Patients must also fund the cost of travelling to hospital, and in most cases manage the logistics of getting themselves to there in an emergency, as the hospital only had one ambulance.

## 3. What challenges are faced in the management of chronic diseases in Belize?

At the Western Regional Hospital, patients with chronic diseases were managed either by general practitioners working in hospital clinics, or by the hospital internist, a specialist in general medicine. In the UK, a patient with complicated diabetes may be seen by an endocrinologist, and a patient with kidney disease may be under a nephrologist, for example. This was not the case in Belize, and all patients with complicated chronic diseases were managed by the same doctor. In the same clinic, the internist was also required to review patients from a medical perspective prior to surgery and follow up patients recently discharged from hospital, making for very busy, challenging clinics.

Some of the patients that I saw highlighted particular challenges in the system. Chronic renal failure patients requiring treatment, for example, tended to be on peritoneal dialysis as haemodialysis was only available in Belize City and operated with very limited capacity. The waiting list was full at the time of my elective, and one of the doctors described how difficult it was having patients for whom she could not access effective treatments. The same situation applied to many other treatments freely and widely available in the UK. Another patient with diabetes and hypertension presented for follow up, after an admission for hyperkalaemia. I was told how his hyperkalaemia had to be diagnosed on the basis of symptoms and ECG changes, as blood results would have taken too long to come back from the lab and there was no ABG machine in the hospital. Chronic conditions were also largely treated without reference to standardised guidelines. Individual doctors tended to make decisions about when to start treatment and with which medications. Monitoring of chronic conditions such as diabetes was also done on a more ad hoc basis. In the UK, patients with diabetes would be called for annual review to assess appropriateness of treatments and monitor for complications, but this was not the case in Belize. HbA1c testing was not available at the hospital, so if patients wanted this test to monitor treatment efficacy, they had to pay for it themselves at a cost of around US$20 per test. As a result, very few patients had regular HbA1c monitoring as would be done in the UK.

4. **Discuss ways in which healthcare professionals in Belize acted to optimise the care of their patients despite these challenges.**

Despite the numerous challenges faced by healthcare professionals in Belize, I observed several things that impressed me during my elective. The general practitioners, for example, saw more patients in each session than any clinic I've ever observed in the UK. Coming from a system where patient choice is emphasises, this efficient, didactic approach was surprising at first, but I came to appreciate its necessity and benefits. Whilst it didn't always allow for particularly in-depth consultations, this approach ensured that patients could present at the hospital without an appointment and be seen by a doctor the same day. The clinics were always busy and the staff ensured that the hospital facilities were used to their maximum potential.

The hospital was obviously also keen on promoting public health messages, and at the time of my visit there were posters everywhere promoting breastfeeding. I was particularly impressed by the time and effort the internist took during her very busy clinic to ensure that she explained things properly to patients. She was rightly concerned about the rise of obesity in her patient population, and carefully explained to her patients how they could alter their diet and improve their lifestyle to benefit their health. Although she had a queue of patients with widely varying problems, she gave among the most thorough lifestyle advice of any doctor I've ever observed. There was also more flexibility of roles than in the UK system, with for example the general practitioner stepping in to suture wounds in A&E if there was no-one else available, which I think was vital to helping the hospital run smoothly.