

## **ELECTIVE (SSC5b) REPORT (1200 words)**

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

### **Emergency Medicine in Belize**

Belize is a former British colony in Central America, situated on the Caribbean coast. It has a population of around 360,000, and has the lowest population density in Central America. Belize is classified as having a lower-middle-income economy. It spends just under \$500 per capita on healthcare, (5.8% of GDP). Just under half the population live in an urban setting, with the rest living rurally. The quality of infrastructure is not good, particularly in the more rural areas.

The Western Regional Hospital is located in the capital, Belmopan. It provides both primary and secondary care services. In addition to these it offers services in obstetrics & gynaecology, surgery, paediatrics and internal medicine. It also includes an acute psychiatric unit to serve mental health needs in the area.

**What are the prevalent causes of emergency admissions in Belize? How does this differ from the UK?**

There are many similarities, but also many differences between the causes of emergency admission in Belize and the UK. There is a significant disease burden of cardiovascular disease (and diabetes) in Belize leading to many admissions relating to this, such as ischaemic heart disease. There are increased admissions for maternal and neonatal problems; these were related to less monitoring in pregnancy and poorer maternal nutrition, combined with less ease of access to services than in the UK. This is associated with practical issues related to the lower density of medical centres and the lack of transport and infrastructure. There is also a significant number of emergency admissions relating to homicide, suicide and conflict, and unintentional injuries. The reasons behind this are multifactorial; a combination of socioeconomic factors (and issues that stem from these) and general safety (as found in a less-developed, rather rural country). The safety aspect is well demonstrated when looking at road safety and road-traffic accidents - a significant contributor. Roads and vehicles are less well maintained than in the UK, safety laws are laxer (or the enforcement is) and as a result accidents are much more common and the outcomes more severe. Work-related accidents of varying degrees of severity are also much more common than in the UK.

Compared to the UK, Belize has (unsurprisingly) many more emergency admissions due to various tropical diseases, most notably dengue fever and malaria. In addition to this, admissions due to gastroenteritis are more common, most likely due to relative lack of access to clean water and poor sanitation.

**How are emergency services organised and delivered in Belize? How does this differ from the UK?**

**Medical services (including emergency care) are made up of both private and public provision. The private healthcare in Belize is generally of a high standard (due to increased resources) but is not widely used due to the cost; mostly expatriates or the wealthiest in Belizean society. The quality of public healthcare can vary greatly depending on location. In some of the biggest cities, the standard is relatively high, with the most specialised services available at a few key centres around the country (such as Belize City). There is generally one such centre per healthcare 'region' (North, South, East and West).**

**However, in the most part, lack of funding impacts the overall quality of care delivered, as I have seen in the Western Regional Hospital in Belmopan. This leads to limited supplies (including medications and medical 'sundries'; things such as sterile gloves that we take for granted in the UK), insufficient/outdated equipment, limited resuscitation bays and intensive care beds, and the knock-on impact of poor infrastructure (power cuts are common and backup generators unreliable/non-existent, even in hospitals). This becomes more significant the more remote the location. With regards to the emergency services, a lack of ambulances mean that most patients have to make their own way to hospital, either by slow and inconsistent public transport, or by family/friends. This can worsen outcomes due to much-delayed presentation to the hospital. As much of the country is relatively rural and undeveloped, a large proportion of the population are many hours away from the most basic health services.**

**Describe the common emergency presentations and the resulting public health initiative in Belize. Compare them with those in the UK.**

**As previously discussed, common emergency presentations in Belize include those relating to cardiovascular disease (i.e., ischaemic heart disease). The risk factors for such pathology is very clear in Belize; many members of the public are clearly overweight and a large number of patients are diabetic. The standard Belizean diet revolves around deep-fried food and carbohydrates, with very little fresh vegetables. Smoking rates are also high, with cheap cigarettes and lax rules surrounding smoking (striking when compared to the cost and limitations on smoking in the UK). There are educational posters in medical centres and attempts by health professionals to educate patients on healthy lifestyle choices, however it doesn't appear that such initiatives are making much impact, as food is so ingrained in cultural identity.**

**There are also public education campaigns regarding mosquito-borne illness. This is a combination of the awareness of symptoms, and also has a more environmental aspect focussed on mosquito eradication. For example, people are encouraged to try and reduce places where the mosquito larvae can live and grow, such as by tipping out old tyres whenever it rains to reduce the amount of stagnant**

**water. This is particularly interesting as it isn't an isolated public health campaign, it also involves the environmental department of the government.**

**Gain insight into the delivery of emergency healthcare in a relatively resource-poor setting. Develop practical skills in said resource-poor setting.**

**The delivery of emergency healthcare in a resource-poor setting is challenging. The lack of supplies means that you often have to improvise, and many bits of equipment that are disposable in the UK are re-used. It forces you to be efficient in your diagnosis and management, making you think much more carefully about ordering various tests (with regards to how much they are really needed) than when in the UK (although even then you shouldn't, it's very common to order things 'just to check').**