

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

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

**I travelled to Belize for my elective. Belize is a fascinating country in Central America with a diverse culture and unique identity. It is a developing country with a population of 332,000 people. Belize has four regions - the Northern, Central, Southern and Western territories. These regions collectively form the country's healthcare system. The only tertiary centre in the country is in the country's capital, Belize City (Central Region). Belmopan is in the Western Region of Belize and is the country's second largest city.**

**Objective 1: What respiratory conditions are most prevalent in Belize? How does this pattern of disease compare to the UK?**

**Respiratory conditions in developing countries can present a huge challenge to, and indeed put significant strain on, a country's healthcare system. Despite comprehensive literature searches, the exact prevalence of different respiratory diseases in Belize is not accessible. There are, however, a number of credible statistical sources available which shine a light on the impact different respiratory conditions have on both morbidity and mortality in Belize.**

**Smoking tobacco is known to be a significant risk factor for a plethora of respiratory diseases. Approximately 12% of the Belizean population smoke tobacco, with a significantly higher proportion of males (22% of all males) smoking tobacco compared to females (2%). Acute respiratory infections can often be associated with smoking and equate to the third largest cause of morbidity in the general population in Belize.**

**Acute respiratory infections, accounts for approximately, 20% of hospitalizations among children, and a significant cause of morbidity. It is also worth noting that other respiratory conditions such as bronchitis, emphysema and asthma are also major causes of hospitalisation in Belize.**

**In the United Kingdom, lung cancer, lower respiratory tract infections and chronic obstructive pulmonary disease are among some of the most common causes of death, second only to ischaemic heart disease and stroke disease. However, in Belize the pattern of disease, and therefore the list of most common causes of death are totally different to that of the UK; lower respiratory tract infections are the sixth largest cause of death in Belize in a very different looking list of the top causes of mortality in the country, behind ischaemic heart disease, diabetes mellitus, interpersonal violence, stroke and HIV.**

Chronic respiratory diseases, cardiovascular diseases, cancers and diabetes are collectively responsible for approximately 40% of all deaths in Belize annually, whereas communicable diseases including HIV and acute respiratory tract infections equate to 20% of all deaths. These statistics portray the significant differences in the burden of disease between Belize and the UK.

**Objective 2: Describe how, in the acute setting, the provision of effective medical treatment in Belize compares to that observed in NHS emergency departments.**

During my emergency medicine rotation in my final year at medical school I was shocked at the state of crisis the emergency rooms of our beloved NHS find themselves in. It often felt like the whole system was falling into disarray with long waiting times, numerous people lying on hospital beds in corridors and a general sense that everyone was on board a sinking ship. Staff were pushed to the limit and were working tirelessly around the clock to try and offer the best level of care in the testing conditions they were in.

My observations of the provision of medical treatment in the emergency room in Belmopan were quite different to some of my experiences in the UK. In some respects, the emergency department in Belize seemed to be more efficient than the ones that I have experienced in the NHS. People were generally seen fairly quickly after arriving at A&E and after being triaged by a nurse would see a doctor shortly afterwards if the patient's condition or management required the doctor's attention. Of course, the number of patients trying to access this emergency department doesn't compare to that of the Royal London, one of London's busiest emergency departments.

The Western Region Hospital in Belmopan is a secondary centre that almost exclusively serves the entire Western Region of the country, apart from a handful of smaller hospital clinics. Many patients access care from their emergency department with a wide range of medical problems, ranging from a fractured radius to dengue fever, and from postpartum haemorrhage to zika virus. This is what I find stimulating about emergency medicine: you simply just don't know who is going to walk through the door.

**Objective 3: Global/Public Health related objective:**

**What hospital and other local policies are in place to help prevent an increase in the international prevalence of antibiotic resistance?**

Despite attempts to access hospital policies on the use of antibiotics in Belmopan, I could find no evidence of there being any. I found this rather worrying as it is a personal belief of mine that the rising prevalence of antibiotic resistance will present perhaps the greatest struggle to my generation of doctors. Without adequate local, national and indeed international policies on antibiotic use, we

unwittingly provide a platform for antibiotic resistance to rise, thus limiting the number of effective antibiotics that we have at our disposal and simultaneously burdening future generations with bacteria that may pose a significant threat to public health.

Fortunately, the World Health Organisation publish a drug formulary and therapeutics manual for Belize with comprehensive guidelines on how to prescribe different antibiotics in Belize, with detailed information on a wide range of antibiotics. These guidelines on prescribing, like the British National Formulary used in the UK, include what the indications are for treatment with a certain drug, what dosage should be prescribed and whether there are any side effects. I was impressed to read notes in this guidance on the antibiotic sensitivities of certain organisms and why dual antibiotic therapy should be used to treat certain infections to avoid a rise in antibiotic resistance.

#### **Objective 4: Personal/professional development objective:**

To improve my knowledge in the diagnosis and effective management of unwell patients in a developing country.

The Western Region Hospital in Belmopan has limited capabilities in terms of being able to carry out advanced investigations and imaging; it doesn't, for example, have either a CT or MRI scanner. One can request x-rays and simple blood tests but not a lot else. This resource limited setting puts even greater emphasis on taking a thorough history and conducting comprehensive examinations on each patient.

The stethoscope may be one of the only tools available at you at any particular time. As a result, being almost neurotic in your approach to examination is key. For example, while taking a respiratory examination, listening attentively to all audible breath sounds throughout the chest and especially at the lung bases is absolutely crucial, as is examining vocal resonance. Once the most useful tool at your disposal has offered all it can to guide you in making a diagnosis, you must percuss the chest and assess chest expansion. Without the aid of imaging, your examination may be the only form of medical assessment available and it is therefore imperative that you work thoroughly in order to develop as a skilled diagnostician.

As is often the case in developing countries, a seemingly constant struggle to stock adequate amounts of medication means that certain medications need to be used sparingly. This can subsequently result in having to make difficult decisions with regards to which patient is able to receive which medicine, based on a calculation and judgement of complex, often evolving, factors such as the clinical need of the patient, the likely prognosis of their condition and a frank consideration how well the required drug is stocked in the hospital.

#### **References**

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**Available**

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**Available at: <http://www.who.int/gho/countries/blz.pdf?ua=1>**

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