

## **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 tropical diseases in the population of Belize and what preventative measures are in place to reduce their incidence.**

Belize is located on the eastern coast of Central America and is host to a variety of tropical diseases. Arboviruses such as zika virus, dengue, malariae and chikungunya carried by vectors like mosquitoes and ticks are particularly prevalent. Their management can be difficult when considering the limited availability of medical resources and staffing. Moreover, not all people in Belize are educated to the same extent on these diseases and this lack of awareness can put them at risk.

Zika is one of the most recent tropical diseases to reach Belize, with the first cases reported in early 2016. Since then, the number of cases detected in 2017 has increased with two suspected to be associated with congenital syndrome. In response to this increasing epidemic, the Intergrated Mayo clinic Program for Arbovirus Community health education, Training and Surveillance (IMPACTS) was formed in November 2017 as a five-year partnership with the Minitry of Health in Belize. Previously, viruses such as Zika could not be tested within Belize and samples would be have to be sent abroad. The program aims to improve detection and prevention of these arboviruses by training clinical microbiologists, increasing arbovirus surveillance and promoting public awareness.

Dengue has been a recurrent problem since the first outbreak in 1978, with increasing incidence yearly. Dengue haemorrhagic fever is a life-threatening complication, causing low blood platelets and bleeding which can lead to hypovolaemic shock. Environmental factors such as improper garbage disposal and poor living conditions contribute to mosquito reproduction and spread of disease. This example is seen in Belize City where around 50% of all dengue cases are seen, specifically in the southern area where these conditions are most pronounced; making up 70% of these cases. The National Dengue 2015-2020 action plan was created in light of this matter to ultimately control the spread of dengue. These are some of the many enduring efforts Belize is taking in order to combat their battle with tropical diseases.

**Describe the accessibility of healthcare in Belize and how this contrasts with the UK over the past decades.**

Belize's healthcare system has undergone major reformation during the last 40 years and is still improving to this day. The first steps were taken during the 1980s when the government recognised the importance of revising their healthcare guidelines, but it was not until 1996 when the National Health plan was implemented to examine areas that could be improved. The Health Sector Reform Project followed in 2000, with one of its primary aims to improve healthcare accessibility.

Currently, the healthcare system is divided into public and private sectors. The government offers free or heavily discounted medical services to all of the general population, however the resources available to them are based on their location, as the majority of funding is allocated to the regional hospitals. This means people living in rural areas may find it difficult to seek medical attention. But even for the Western Regional Hospital in Belmopan who cater for 65,000 people, a capacity of 50 beds can only provide so much. Private healthcare is available at a cost, generally providing better equipment with

some tertiary services restricted to private hospitals. The National Health Insurance program is being expanded amongst the Belizean population in an attempt to further access to free healthcare for all citizens. Overall, accessibility has greatly improved but yet clinics and hospitals still face problems with medical supplies and bed shortages.

The UK have had the privilege of the National Health Service, established in 1948 and maintaining its standpoint today to provide free healthcare for all residents. Before the NHS, people would have to pay for their healthcare or join health insurance schemes such as the National Insurance Act 1911 where small deductions would be made from weekly income. Although there are many differences between the two healthcare systems, both have pushed towards making healthcare accessible to all.

Describe the effect of previous and current public health interventions on the Belize population.

One of the biggest public health interventions in Belize is HIV/AIDS prevention. HIV is currently responsible for 11% of total deaths and is the 3<sup>rd</sup> most common cause of death. Since the first case diagnosed in 1986, the incidence of HIV has greatly increased. HIV can place huge mental as well as physical strains, as seen in statistics reporting around 60% of all people living with HIV felt ashamed, and 28% reported suicidal ideation. The National HIV/AIDS preventative program was therefore created to offer patient education, diagnosis, treatment and contact tracing. The program aims to provide aid through workshops and psychological help to prevent transmission and help HIV patients live normal lives. International help from various institutions have contributed towards the campaign, and since 2008 the incidence has been slowly decreasing and the government still strives to reduce the impact of HIV/AIDS.

Perceptions of health greatly differ from what I observed in Belize compared with the UK. We are taught about healthy lifestyle interventions like 5-a-day diets and exercise from a young age, whereas a lack of health education in Belize has led to increasing prevalences of obesity and hypertension as we saw in clinic. Around 25% of adults in Belize are reported to be obese and it is recognised that growing problems with chronic illnesses such as diabetes are linked to this. The doctor taught us about the Belizean diet and how the general population are unknowingly consuming high proportions of fat through fried foods and cheaper meats. Dietary guidelines were introduced in 2012 in an attempt to educate the population through user-friendly yet detailed information on nutrition. However, eating healthier can be more expensive and most Belizean people can not afford to pay the difference. Solutions must be sought in order to make healthy food choices available to all.

Describe your experience of working in a foreign country and how carrying out this elective has influenced your professionalism and management of cultural differences in clinical practice.

The opportunity to witness the delivery of healthcare in limited resource settings and experiencing the stark contrast in cultural and social norms was eye-opening. In the UK, we are lucky that many healthcare services are available to everyone at no cost. But in a country where 43% of the population are below the national poverty line, this is far from the case. Patients were not as aware of health problems, and most admitted to being unwell for several days before choosing to see a doctor. This made it difficult especially when treatment options were sparse. Facilities and equipment were also basic. meaning the doctors would have to treat aggressively. For example. a patient presented with

pneumonia so the doctor would give them 5-6 antibiotics initially to cover multiple strains. If resources to treat severely ill patients were not available, they would have to be flown into Mexico or Guatemala.

Initially, I was anxious working in an environment around that was entirely different to the one I've been accustomed to for the last 6 years. Breaking the communication barrier was especially difficult, as half of the patients I encountered only spoke Spanish. I started learning Spanish in my spare time which made conversations easier. The doctor would offer to translate, and I learnt how to communicate effectively and professionally between the patients and translator. In summary, learning to work within their clinical environment as well as experiencing Belizean culture was highly rewarding, and has subsequently broadened my outlook on medicine. I am grateful for this invaluable experience prior to starting my foundation training.

#### References:

1. Pan American Health Organisation. "Zika-Epidemiology Report: Belize". PDF available at: [http://www.paho.org/hq/index.php?option=com\\_docman&task=doc\\_view&gid=35105&Itemid=270&lang=en](http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=35105&Itemid=270&lang=en).
2. Ministry of Health Belize. "National Dengue-Chikungya Action Plan 2015-2020". PDF available at: <http://www.proyectomesoamerica.org:8088/smsp/phocadownload/Institucional/PlanesNacionales/PNDengue/BLZ%20PN%20Dengue.pdf>
3. Ministry of Public Health of Belize: National AIDS Program. "Modes of Transmission Model - MOT" New HIV infections expected in Belize for 2014. PDF available at: [http://www.pasca.org/userfiles/MOT\\_Belize%20final%20report%207\\_March\\_2014.pdf](http://www.pasca.org/userfiles/MOT_Belize%20final%20report%207_March_2014.pdf)
4. Stigma Index. People living with HIV Stigma Index: Belize. PDF available at: [http://www.pasca.org/userfiles/MOT\\_Belize%20final%20report%207\\_March\\_2014.pdf](http://www.pasca.org/userfiles/MOT_Belize%20final%20report%207_March_2014.pdf)