

ELECTIVE (SSC5c) REPORT (1200 words)

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

Medical elective Report: Tropical medicine

Objective 1: Describe the pattern of disease/illness of interest in the population with which you will be working and discuss this in the context of global health: What tropical diseases exist in the Mazan area of the amazon and how does it impact on the local population?

In Mazan there are several tropical diseases. By far the most common one seen is malaria, which has two types in this location: plasmodium vivax and falciparum. P. vivax is far more common but much less severe with patients rarely dying from this form of the malaria parasite. There is also leishmaniasis, which is caught through bites from sand flies, snakebites, dengue fever, yellow fever as well as several gastrointestinal parasites (such as giardia). Malaria has a big impact on the local population, and inhabitants are commonly infected and re-infected numerous times in their lifetime. Both forms of malaria cause fever, fatigue and generalised myalgia. This causes great adverse effects on people's physical and mental wellbeing and it means the patients are unable to work or carry out their normal daily tasks. In addition to this, plasmodium falciparum will kill if left untreated because it will progress to cerebral malaria. Another impact of malaria is its great drain on both medical and environmental resources focussed on preventing the tropical disease. The implication of this is resources are directed away from other medical conditions, primary prevention measures as well as other local municipal services (such as education, transport and sanitation). Although not exactly a tropical disease per se, snake bites do occur much commonly in tropical areas of the world, such as Mazan. In one such case that I saw, the local patient had been bitten by a snake and presented with only mild pain around the injury site. He received the intramuscular antidote and appeared to be stable and so went home. However, later that day the snake venom had caused him to become anuric and he developed an acute kidney injury. This resulted in him being transferred to the intensive care unit at the hospital in Iquitos, which is 35 minutes away by boat from the health centre. The learning point of this is that serious harm can quickly develop from this tropical condition. It also means that patients may become unstable and die as there is no immediate access to advanced medicine. Overall, from our time studying tropical medicine in Mazan we have seen many tropical diseases, with malaria being the most common. The implication on the local population is great and a large amount of resource is used in treatment and prevention of such diseases.

Objective 2: Describe the pattern of health provision in relation to the country which you will be working and contrast this with other countries, or with the UK: What is the pattern of health provision in the Mazan area of the amazon and how does compare with that of the UK?

The provision of healthcare in the health clinic in Mazan itself is similar to general practice in the UK. The centro de salud, or health centre, is the first port of call for anyone with a healthcare need. On a day-to-day basis, the centre has two doctors on shift. They hold consultations in a very similar manner to GPs in the UK. They find out what the problem is and then advise, prescribe and refer to secondary care if necessary. One big difference between provisions of care in these consultations is that a "pill" is given in almost all infectious patients. This is true even if it is probably a virus as the cause of the infection. Although this often occurs in UK GP surgeries, it is a much bigger problem in Mazan and will likely increase the chance of antibiotic resistance. The centro de salud in Mazan also runs a very comprehensive childhood vaccination programme. It is almost identical

to that which runs in the UK except all children receive a BCG jab against tuberculosis, and hepatitis B vaccine. I found this quite surprising and did not expect such a competent immunization programme. The other service at the centre is obstetrics. There is a high birthrate in Mazan and so an obstetric department is very much needed for the area. The centre has facilities for antenatal consultations and a birthing room. This is a contrast to GP surgeries and community clinics in the UK as most do not have specialized birthing rooms. The centro de salud receives its funding from two main sources: the central government and from charitable organisations. This allows an organised health centre to operate effectively and at zero cost to the poor community. Patients that are referred to secondary care in the Iquitos hospital also receive free healthcare. One big difference between healthcare provision in Mazan and the UK is the lack of disease prevention; except tropical diseases. Patients are not screened for any diseases and primary or secondary prevention strategies (such as for cardiovascular diseases) are not used. The developing nature of the area means that more is needed to improve the health of the local population. However there is not a simple solution and as is usually the case, more funding and education are needed to improve the health of people in the area.

Objective 3: Health related objective: To determine if differing health care beliefs of the local population clash with the beliefs of western medicine and if this affects patient care.

In terms of our lack of Spanish it was difficult to determine the health beliefs of the local population. However from speaking with the doctors and observing patient consultations there does not appear to be an issue with local culture clashing with western medicine. The patients I saw in clinic all seemed to listen and adhere to advice and treatment given by the doctor. This allowed effective patient care and a good level of healthcare in Mazan. One of the days on my elective was spent with the environmental officer. It was his job to inspect the homes of the people living in Mazan to try and reduce the risk of malaria and dengue fever by removing stagnant water from their house and gardens. Stagnant water in old tires, buckets and other containers are a prime breeding ground for mosquitoes, which act as a vector for the deadly parasites. Therefore eradication of these breeding zones should help reduce the prevalence of these tropical diseases. Many of the homes we visited had stagnant water in their gardens; many of which contained mosquito larvae. Although many of the households were willing to accept and follow our advice about stagnant water disposal, there were a few who did not understand or seem convinced by the environmental officer. The impact of people not taking responsibility of their own local environment is that health quality is poor and so tropical and infective diseases can thrive. This is an important area in which local understanding and western beliefs need to align.

Objective 4: Personal/professional development goals: To improve my medical knowledge and skills in a challenging environment and to reflect on the difference in care available in a rural developing area compared to the UK.

It has been a great experience in Mazan to see both how the poorer rural health system operates as well as applying my medical knowledge and skills. Before coming to Peru and Mazan my knowledge of tropical medicine was very minimal. There is little teaching in the UK as well as next to no cases of malaria and other tropical diseases. After being in Mazan I now know how these diseases present, how to investigate and to treat. This will be very useful for my clinical practice at home and I will have an increased preposition to keep tropical diseases in my differential diagnosis. An advantage to spending time in a rural health clinic is that they do not have advanced investigative machinery or treatment to assist doctors and nurses in treating their patients. This meant that my clinical skills were the most important tool and I had to diagnoses a problem. This proved pertinent when trying to diagnose pneumonia. There was no X-ray to help diagnose a

bacterial pneumonia. Therefore I had to rely upon my history and examination skills to decide whether a “chest infection” was pneumonia or a simple viral infection, which wouldn’t need treating. Overall, my experience in Mazan was very useful and interesting and I think will help make me a more effective and efficient doctor.