ELECTIVE (SSC5b) REPORT (1200 words)

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

The Republic of the Union of Myanmar is a new democracy, only recently transitioned into a civilian government during the 2015 elections after decades of military rule. In the most recent census in 2014, the current population is approximately 51 million, comprised of 135 different ethnic groups. It shares borders with India, Bangladesh, China, Thailand and Laos. The healthcare system is a mixture of public and private sectors however, the Ministry of Health and Sports (MoH) remains the main provider of healthcare services. In addition to government and private services, non-governmental organisations and charities also provide additional healthcare services. It has been estimated that the government previously spends between 0.5-3% of their GDP on healthcare according to the WHO Global Health Observatory Data Repository and has been ranked among the worst in the past. With little government spending, limited resources and a shortage of doctors, healthcare provision in Myanmar is poor. Currently, life expectancy is between 65-68 years.

Access to healthcare for the poor is particularly bleak; they have few to no medical access available. Medical Action Myanmar, the host organisation of my elective is a medical aid organisation, whose mission is to improve access to healthcare for the poorest. I spent majority of my clinical time with the local Burmese doctors in clinics in Hlaing Tharyar and Shwepyitha townships. The clinics are staffed by doctors, on site counsellors, community and administration workers. Hlaing Tharyar A clinic, the largest and oldest clinic is situation in Hlaing Tharya township were approximately 800,000 live in the slums in the aftermath of Cyclone Nargis in 2008. The housing and sanitation is poor, a breeding ground for diseases such as malnutrition, tuberculosis and other infections. However in the midst of such poverty, stands FMI city, a gentrified gated community of bungalows and private houses. Its very existence in the midst of what is one of the most impoverished townships a reflection of the socio-economic disparity among the local population.

Most of the clinics had several main programmes including HIV, a feeding centre for severe malnutrition in children and adults, child health, antenatal care, sexually transmitted diseases and general patients. The clinics work in partnership with the National Aids Programme and the National Tuberculosis Programme in Myanmar. I had time to rotate among the different doctors who were in each of the different programmes in different sites. All of the doctors also saw general patients in addition to the different programmes. As malnutrition is a widespread problem, most of the patients routinely receive multivitamins, folic acid, vitamin B, C, A and ferrous sulfate from the clinics. The commonest presenting complaints among the general patients were indigestion, heartburn, itchiness and back pain. On average, Hlaing Tharyar A clinic sees between 200-300 patients each day, making it one of the busiest clinical settings I have been to.

In addition to the time pressure, resources are limited, many routine tests we take for granted are unavailable. I recall being particularly shocked to see metal speculums and swabs made from ear buds used for STI screening. Currently, cervical cancer screening uptake is only 9% nationally in Myanmar due to lack of cytology services. One of the days while I was in clinic, one of the trustees from Green Shoots, a gynaecologist from America Dr Fred Frank was demonstrating colposcopy with iodine and acetic acid with existing equipment they use for eye screening which is far more convenient solution to the problem. I have immense respect for the Burmese doctors who work in these environments.

One of the things I was deeply impressed by was the support for local doctors. They have opportunities to present their cases at conferences, receive training on technical skills and teaching as well as opportunities in research. I strongly feel that is should be the direction any non-governmental organisation; investing in the local population as it is more sustainable in the future.

As an elective student, learnt from the local doctors who see many more HIV and TB patients, to understand the management and complications for HIV. While the general consensus for the management of HIV is universal test and treat, they often do not start ART treatment until intensive counselling or their CD4 count is less than 500 due to limited access to drugs. However, ART drugs are given out free of charge at the clinic. In addition to HIV, I had arrived at the start of the rainy season, resulting into increased incidence of vector-borne infections such as dengue and Chikungunya. During my time in the different clinics, I had to opportunity to observe lumbar punctures, contraceptive implant insertions and I also performed ultrasound scans on antenatal care patients and eye screening on HIV patients. Sitting in with the doctors also allowed me to observe variety of clinical signs and features such as palpable abdominal lymph nodes in extra-pulmonary TB, palmar-plantar rash in secondary syphilis, CMV retinitis, suspected TB granuloma in the eyes, oral hairy leukoplakia, lipodystrophy secondary to ART, suspected pityriasis versicolour, hepatosplenomegaly, paradoxical IRIS in HIV patients recently starting on ART and genital warts. The doctors also received weekly teaching by various other staff members or visiting doctors on topics such as non-TB pulmonary infections in HIV patients, hepatitis C, chest X-rays, COPD, asthma, melioidosis and penicilliosis which I also found very educational. I also had the opportunity to attend a conference/workshop organised by Green Shoots Foundation on HIV, discussing topics such as the current situation of HIV worldwide and in Myanmar, drug resistant HIV, management of complications, co-infections with hepatitis B/C and multidrug resistance TB. It was extremely helpful as I had very little exposure to HIV and infectious diseases in medical school.

In addition to clinical exposure, I was also involved in collecting data on antibiotic prescription as part of an on-going larger study as part of a strategy to combat antimicrobial resistance (AMR). There has been evidence showing that antimicrobial resistance is associated with an increase in morbidity and mortality in hospital inpatients. Asia not only the world's highest antibiotic prescription rates in the community and in hospitals, antibiotics are also freely available without a doctor's prescription over the counter. Moreover, the lack of drug regulation in these countries have lead to the rise of counterfeit drugs and drugs in the black market. As a result, simple and reliable diagnostics tools are being developed to rationalise the prescription of antibiotics with the aim of combating emerging resistance. Hence the CRP study, investigating the impact of C-reactive protein testing on antibiotic prescription in febrile patients attending primary care in low-resource settings. As part of the study, I was involved in collecting antibiotic prescription data at the various sites where the study was being held. The objective was to compare the antibiotic prescription behaviour of the doctors before, during and after the study; independent of the use of C-reactive protein as participation in the study itself may improve antibiotic prescribing rates. Anecdotally, it appears that the number of prescriptions have dropped particularly in the antibiotic class of beta-lactams in the clinics. It was difficult to ascertain if the antibiotics prescribed was appropriate as there is often limited documentation. I would be very interested to see the result of the study when it is completed.

My elective has given me the opportunity to travel to less popular parts of Yangon, mingle with the Burmese (and pick up a few words simultaneously), travel around the country and learn about the local culture. I found this elective very enjoyable and educational. It has been a great opportunity to

experience various aspects of tropical medicine and infectious diseases in a low-income, limited resource setting. I hope to continue pursuing this field of medicine in the future through my academic foundation position in infectious diseases at Cambridge and some day come back to the region.