

ELECTIVE (SSC5c) REPORT (1200 words)

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

What are the prevalent cardiovascular and dermatological conditions in remote populations of Brazil? How does this differ from the UK?

According to the World Health Organisation, cardiovascular disease and diabetes are prevalent conditions in both urban and rural Brazil, and are the leading causes of morbidity and mortality. This is similar to the UK, with ischaemic heart disease and stroke accounting for over 20% of deaths alone. The prevalence of such cardiovascular disease was evident throughout the missions. Patients often presented with multiple comorbidities of cardiovascular origin; hypertension, ischaemic heart disease, and heart failure being some of the more common conditions. These were often poorly managed or not followed up after diagnosis, leading to severe manifestations of disease.

Similarly, dermatological conditions are very common, with patients often presenting in advanced stages of disease due to poor prevention measures and treatment. Common conditions of the rural populations, whom rarely make contact with health services, include irritant dermatitis, psoriasis, and sun-related skin damage. We made numerous diagnoses of benign and malignant skin carcinomas, particularly in those of agricultural background whom had high sun exposure. Furthermore, contact with fertiliser and pesticides meant that this population was particularly vulnerable to severe dermatitis. Psoriasis was commonplace, and it was quite normal for us to have patients present with severe and uncontrolled lesions. The tropical location of Brazil also means that systemic mycoses are diverse and prevalent.

How are medical services organised in Brazil, and how are they delivered in remote populations? How does this differ from health provision in more populated areas? How does this differ from the UK?

The healthcare system of Brazil is very different to that of the UK. Whilst it similarly comprises both public and private sectors, less than 50% of Brazilian healthcare is public, compared to more than 85% of UK healthcare. The public Unified Health System (Sistema Único de Saúde; SUS), was introduced in 1988 after increasing health inequality and an increasing emphasis on the right to healthcare for all. Inspired by the format of the NHS, the cornerstone of the SUS is universality and sustainable healthcare, free at the point of access. Services are provided by municipalities, providing healthcare which is funded by the state and federal government. Access to healthcare has since vastly improved for a significant proportion of the Brazilian population, and the SUS has contributed towards reducing morbidity and mortality from a number of common and serious health conditions. However, despite such advancement, the Brazilian healthcare system continues to face major challenges in achieving sustainability, universality and equitability. Continental dimensions, socioeconomic inequality, and infrastructural inefficiency service are some, to name but a few. Indeed, the SUS is largely decentralised and underfunded; the political environment also contributing to inefficiencies in delivery of and access to services. Indeed, healthcare services are concentrated in large central cities and medium-sized conurbations, often leaving persons in remote and rural areas geographically and socio-economically isolated from prevention and treatment services. There is a great disparity in the

quality and quantity of staffing, medical technology and infrastructure between the more affluent areas and rural communities.

The remainder of the health system structure remains private; fee payment for services and pre-paid reimbursement being the means of access. Public-private-partnerships go some way towards overcoming the shortcomings of the SUS, however, many are unable to afford out-of-pocket payments or health insurance, contributing to further health inequality. This was particularly evident during our missions to the smaller towns and rural communities; many people had either never consulted with a physician, or were presenting for the first time in many years. The level of health education in these areas was poor, and we found that there was generally a lack of follow-up of patients, limited drug provision, and few physicians with sufficient experience to adequately meet the needs of the local population.

Such a system contrasts with the current UK health system. The founding principles of the NHS remain today, and include universality of care, free at the point of access, and funding through central taxation. Governmental investment in healthcare is significantly higher than that of Brazil, and with smaller proportions and better infrastructure, access to free care is considerably more easily achieved for the UK population. This results in comparatively less health inequality.

Discuss the efficiency of telemedicine as a method for supporting medical practice and healthcare provision in remote populations. Reflect upon the ethical considerations of eHealth initiatives, particularly with regard to confidentiality.

Telemedicine is at the forefront of a medical revolution. Information technology is becoming increasingly fundamental to healthcare, and its role is evolving. In places where health inequality is particularly problematic, such as Brazil, telemedicine is hypothesised to improve access to healthcare for those most geographically and socioeconomically isolated. Indeed, several large, public health trials have highlighted the feasibility and effectiveness of telemedicine in the state of Minas Gerais in Brazil; the state-side telemedicine service has been recognised as a success by the WHO. The benefits of telemedicine include improved quality of primary care services, cost reduction (particularly transportation costs for patients and professionals), establishment of experienced healthcare professionals in remote communities, improved access and resource utilisation. Such benefits are thought to facilitate the movement closer towards the ultimate goals of global healthcare; universality, sustainability and equitability.

The role of telemedicine in the UK is considerably different, and very much in its infancy. A largely public healthcare system, smaller geographical dimensions, and excellent infrastructure mean that access to care throughout the country is a significantly smaller issue than in Brazil. Studies have shown that whilst the efficacy of telemedicine in the management of various chronic conditions is equal to that of regular care, cost-effectiveness remains a significant obstacle to its wider application.

Practice clerking patients with the aid of an interpreter

Throughout the missions, each patient was clerked as part of the triage process. Prior to the missions, as part of the training process, we undertook short lessons in speaking Portuguese in order to build

rapport with the patient by way of initial introductions. We introduced ourselves to the patient and explained the reason for the presence of the interpreter. This put patients at ease, and facilitated the taking of their medical history. The use of an interpreter was challenging, and is not something I had previously been exposed to. It required a higher level of communication ability, particularly in terms of flexibility and adaptability of language, given that the translator had no medical training. There were difficulties in understanding, but I found that briefing the translator beforehand in terms of my line of questioning and what my expectations were really helped. As I will be training in East London, where there is a large immigrant population, this clinical experience was invaluable; I will make sure to apply such skills to future consultations.

Practice ECG acquisition and interpretation

During my medical training, I have become competent in ECG acquisition. Therefore, I had little problem in explaining the procedure to patients and obtaining an accurate 12-lead picture. However, I have previously had difficulty with ECG interpretation, as I failed to fully grasp the foundations in earlier years. This elective provided the perfect opportunity to address such issues and put into practice my analytical and diagnostic ability. Each patient triaged to the cardiovascular service required an ECG for specialist referral; here I was responsible for ECG interpretation and formulation of differential diagnoses. I ensured that prior to the missions I had prepared by reading through the basics of ECG analysis, and as a group we formulated a template for comprehensive review and documentation. My confidence grew with repeated practice, and the presence of colleagues allowed review of each ECG as a team, in order to confirm pathology and identify mistakes. With my first rotation as foundation year doctor being cardiology, I feel considerably more comfortable being faced with the task of rapid and accurate ECG interpretation.

Develop skills in assessment and diagnosis of dermatological and cardiovascular conditions

Assessment and diagnosis of dermatological and cardiovascular conditions formed the basis of this medical elective. Whilst dermatology forms very little of the medical curriculum, due to its specialist nature, I found that my thorough understanding of the basics of dermatological language and lesion appearance allowed me to accurately diagnose conditions in the most part. Application of particular approaches to describe lesions, such as the ABCDE approach to assessment of naevi, came naturally and facilitated confident formation of a lead diagnosis and comprehensive referral.

There were plenty of patients with cardiological complaints, and therefore I had ample opportunity to practice focused history taking, examination and ECG interpretation. I felt confident in asking open and closed questions, relying on my knowledge and previous experience to determine whether or not the presenting complaint was of cardiac nature. Examination and ECG interpretation facilitated diagnosis, and guided referral and explanation to the patient. One particular case will remain in memory; a lady presented to the emergency department of a rural clinic with central chest pain. The paramedic heard that we were working at the hospital, and asked for our help. As a team, we assigned roles, assessed the patient, and quickly established that she was having a myocardial infarction. We recommended and initiated the most appropriate treatment, and referred the patient immediately for coronary intervention at the larger city hospital.