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 health conditions of the population served by Milton Cato Memorial Hospital, and how do these differ from those in the UK and other more economically developed countries?

Saint Vincent has a very young population in direct contrast to the ageing population of the UK and other more developed countries; of the two populations, 25% and 17.5% respectively are aged 0-14 while 10% and 23% respectively are aged over 60. These contrasting population demographics result in differing prevalent health conditions, with substantially more age related diseases such as cancers and cerebral vascular disease evident in the UK than in Saint Vincent.

Certain conditions are however surprisingly prevalent in Saint Vincent despite the younger population, in particular cardiovascular disease. This is primarily secondary to the high incidence in the population of two major cardiovascular risk factors, often co-existing: type 2 diabetes mellitus and hypertension. As a result, heart failure and ischaemic heart disease in particular were common presenting conditions. Such patients however usually were presenting at a relatively young age, certainly younger than that typical in the UK, as quite often the lack of patient education, medication compliance and access to healthcare meant their hypertension and/or diabetes was poorly controlled, resulting in rapid disease progression. Similarly, the prevalence of marijuana smoking means that COPD and pulmonary carcinomas are more common than might otherwise be expected.

In contrast however there are some diseases which would almost never be seen in the UK; a young man presented with rheumatic heart disease to A&E, while on the general medical wards parasitic infections such as Strongyloides were not uncommon. Parasitic infections are also more common in Saint Vincent because of the much higher prevalence of HIV/AIDS. Many conditions presented at a much later stage than would be expected in a developed country, and with individuals mor likely to be malnourished, with significantly poorer outcomes as a result. Also, due to the high prevalence of manual labour in the population level, orthopaedic conditions such as osteoarthritis are common, as too are accidental workplace injuries and fractures. There does also appear to be a higher rate of violent crime in Saint Vincent than in the UK, with A&E admissions for knife or gunshot wounds more common, while road safety is much poorer with a resulting increased frequency of hospital admissions and deaths from road incidents.

Perhaps the most surprising comparison between Saint Vincent and the UK is that admissions to A&E of asthma exacerbations seem to be higher in the former. This is the opposite of what I expected, as the current prevailing theory of the hygiene hypothesis would predict a lower incidence in Saint Vincent. Possible reasons for this not being the case include the probability that the incidence of asthma is not higher but control is poorer leading to more regular admissions, while the pollution present at times from vehicles might trigger attacks.

How do the emergency and internal medicine facilities differ in St Vincent in comparison to the UK?

The emergency and internal medicine facilities available in the UK and St Vincent differ drastically; MCMH suffers from significant financial difficulties with the current budget issues suffered by the government resulting in an ageing hospital building with greatly limited facilities. Whilst on placement at

MCMH the hospital intermittently ran out of such basic medications as lidocaine, heparin and several antibiotics, along with essentials such as ECG paper, whilst hygiene basics such as gloves, soap and alcohol hand gel are at a premium. Radiology facilities are significantly inferior; the island has a single CT scanner – which, although government subsidised, requires a £200 payment from the individual, which most cannot afford- and no MRI scanners. ultrasonographers are only available during the afternoon. The emergency department lacks peak flow meters despite numerous asthmatics attending daily, and the ceiling tiles have substantial amounts of fungus growing on them around all the air conditioning vents. Computer facilities are limited to a few computers on A&E, with X-Ray films examined using light boxes or, more commonly, nearby lights or windows.

In summary, Milton Cato Memorial Hospital is a resource deprived hospital in a developing country of limited resources, suffering from a striking lack of facilities in emergency and internal medicine in comparison to the NHS.

Asthma is a common cause of attendance to A&E services in both St Vincent and the UK. How do the treatments of asthma differ between the two countries, both with regards to its long-term treatment and that of acute attacks?

The ideal treatment protocols of the two countries are very similar, but differences however arise primarily due to the realities of the limited resources available in Saint Vincent. With regards to the long-term treatment of asthma, both countries employ a first step of salbutamol inhaler PRN, followed if this provides inadequate control by a second step of additional daily inhaled corticosteroid preventer therapy. In the UK failure of this to provide adequate control would result in the patient being escalated through further stages as necessary, employing usage of long acting beta-2 agonists, leukotriene receptor antagonists, and theophylline. In Saint Vincent however such medications are not widely available, resulting in a significant proportion of patients being unable to adequately control their asthma symptoms. Additionally, local primary care follow up is not as easily accessible and available, resulting in many patients not having their medications escalated as needed in good time. Lastly, it would appear that the level of understanding of asthma and compliance to medications of the average asthma patient in Saint Vincent is less than that in the UK. One unexpected difference I noted was the prevalent usage of home nebuliser machines in Saint Vincent, something not often used in the UK.

In combination, these multiple aspects result in asthma patients in Saint Vincent having much less control over their symptoms than they would in the UK. This leads in turn to a much greater regularity in their suffering exacerbations, with much more frequent A&E attendances and admissions. So common are mild/moderate asthma attack presentations to A&E that they have an asthma ‘bench’ in front of the nurses station solely for these patients, with numerous oxygen sockets available for nebuliser administration.

As with the long term treatment of asthma, both countries apply similar principles to the treatment of acute asthma attacks but resources limit the ability of Milton Cato to follow UK or US guidelines. A major issue is the complete lack of peak flow meters in A&E, and a relative lack of pulse oximetry machines, making it difficult to quantify the severity of an ongoing asthma attack and therefore the necessary treatment. Most of those attending A&E are however suffering only mild to moderate degree attacks and receive similar treatment to in the UK, i.e. Oxygen with nebulised salbutamol, oral prednisolone, antibiotics if there is an underlying respiratory infection, and discharged with five days’ supply of prednisolone. Quite often however the hospital lacks prednisolone and patients are forced to buy it privately from a local pharmacy. With regards to severe and life threatening asthma attacks however treatment in Saint Vincent is limited by the lack of magnesium and aminophylline, although there is anaesthetist support and their two bed ICU does have ventilators.

Personal and professional development goals

One reason for my choosing Saint Vincent was to see some of the medical conditions that are rare in the UK. Having seen conditions such as rheumatic heart disease, parasitic infections, atypical pneumonias and more advanced presentations of many diseases common in both the UK and Saint Vincent, I feel that I have achieved this aim.

Also, I have seen repeatedly on ward rounds the intelligent and thorough usage of examination findings and straightforward blood test results to deduce differentials. I have hopefully taken some of that knowledge and skill away with me, so that when I start work in August and onwards I will be able to better deduce differentials and target my investigations better, saving my patients from unnecessary invasive tests, improving their care outcomes and saving NHS resources.

Finally, and most importantly, I chose Saint Vincent for my elective to experience medicine in a resource poor developing nation, in the hope of enhancing both my appreciation of the resources available to us in the NHS while also reducing my dependence upon those resources for accurate diagnosis and treatment. I believe that my elective has firmly achieved both of these goals. Having now seen the sparse resources present in Milton Cato Memorial Hospital and what is achieved with these, I both respect what is achieved by the doctors here within their constraints and admire the ongoing efforts to provide basic healthcare on a free-to-access basis, and leave appreciating more what is available to us in the UK.