ELECTIVE (SSC5c) REPORT (1200 words)

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

Elective Report – Based on Objectives

The NIH deals with a wide variety of international patients all of whom are attending as they are on a research protocol so the diseases seen at the NIH are not representative of America as a whole population. The NIH has a some areas of focussed special interest including von hippel lindau disease - a mutation in the VHL gene which results in haemangioblastoma formation in the CNS, as well as pituitary microadenomas, synringomyelia and epilepsy. The NIH treats a cluster of patients with uncommon conditions, with patients being referred from around the world for treatments. There are two broad types of protocols patients are enrolled on a) natural history protocols which looks at the natural progression of disease with routine follow up and imaging b) interventional protocols which look at the effects of an experimental intervention.

The NIH as opposed to other hospitals in America provides all its patients with free treatment and covers the costs of travel as patients are essentially volunteers in scientific experiments. However, as volunteers, if they need any surgical intervention while they are in follow up for a natural history protocol, the surgeons at the NIH offer that service without charge, benefitting the patient as well as offering the surgeon an opportunity to perform a variety of procedures. It was evident from speaking to some patients from within that this offer of a free top quality service offered them a lifeline. Anyone can self refer or be referred via their local physician to the NIH, every week there is a multi-disciplinary team meeting examining imaging and history to find out if patients are eligible for a protocol. Whether they are enrolled in a protocol is based on eligibility criteria and whether the NIH could offer them anything they wouldn't be able to access elsewhere. Patients seeking treatment from outside the NIH in the US in contrast will usually pay for their health care using health insurance. There appears to be a large degree of variation in the type of cover. The NIH provides an excellent patient experience but is a unique model of providing health care due to experimental nature of the treatments provided. The neurosurgery department is very different to any of the departments I've experienced back home. There are primarily elective patients although during the month I spent here they did receive one referral from another department for a neurosurgical emergency. Due to the high resource burden of the protocols in order to get high quality data many patients receive an extensive work up so the number of patients referred each weeks varies between <5 to around a maximum of 10 per week for the entire department. There does not really exist a pressure for discharge or beds here and admission can work around when a patient is free to leave.

There is a large multi-disciplinary approach at the NIH with dedicated research nurse practioners offering personalised care to all patients. Each patient has a primary team but often receives consults from a number of different specialties. A large degree of the fast recovery times here is down to the excellent nursing care on the wards. The high levels of staffing on the wards compared to the sometimes understaffed NHS wards makes a huge difference.

The NIH offers a unique opportunity with laboratory research being in close proximity. It was amazing to see biopsy samples taken and a portion acquired for research directly from theatre. This meant that researchers have a large tissue bank of samples here from patients with a number of uncommon conditions such as VHL.

Theatres were largely very similar between the two countries, with items such as the WHO safety checklist being the same. I was expecting given the financial restrictions within the NHS for their to be large differences between the equipment used at the NIH and the NHS, however it was reassuring to know that the neurosurgical equipment in both countries is broadly similar. Although, there was a significant difference in how readily available equipment at the NIH was compared to the NHS. There is also a large difference in the types of imaging available and the waiting times, with PET scans available on site for elective patients.

I have really enjoyed my time here at the NIH and am greatly indebted to those who have taken the time out to teach me. I have learnt that it takes precise time management and prioritisation to maintain the balance between academic and clinical work. One of the key factors is being realistic with the number of cases and the amount of research you can do and ensuring you see each through to the highest standard of completion. One of the overall contributors to the NIH's success is the large collaboration between various research groups and clinicians. I have had the opportunity to gain appreciation of the symptoms of some of the rarer neurosurgical conditions by speaking to a number of patients with such conditions. During my time here I have learnt a lot about basic surgical principles from knot tying and suturing to understanding the equipment in theatres as well as learning a lot about the anatomy involved. The NIH elective has improved my understanding of what it takes to enrol and treat patients who are clinical trials, in addition of what it takes to be successful in Neurosurgery. This placement has provided a great foundation for my FY1 job in August.