ELECTIVE (SSC5c) REPORT (1200 words)

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

Objective 1

In researching the specialty of neuro-trauma across the UK and Australia they broadly have similar incidence and mechanisms of injury. In Southern Australia, traumatic brain injury (TBI) is estimated to be responsible for almost half of trauma deaths, with road traffic collisions accounting for the significant majority of the cases. However the reason I feel it is a highly important area is that it particularly affects a younger demographic, killing more people in this category than other diseases such as heart attacks or cancer. Furthermore unlike many other disease processes the causes of TBI are well known and are mostly preventable. National data on the incidence of specific neuro-trauma cases in Australia was limited when I searched the literature. However individual neurological diseases such as stroke can be estimated from population based studies found in the literature. In general prevalence rates seem to be higher in Aboriginal populations and higher in people from lower socioeconomic groups. Furthermore almost half of deaths from neuro-trauma are recorded in the outer country areas compared to inner metropolitan areas, however only a third of the population live in these country areas.

Factors which I have observed and which may be implicated in disparities between these areas include: first aid administered by the public. I have witnessed in a lot of these cases family and friends undertaking the immediate care without sufficient training. Secondly undesirable delays in transport can occur either due to weather or traffic conditions. I feel that most cases it is out of the control of the retrieval services and thus hard to improve and predict. In London we only have the distance outlined by the M25 to travel and in these cases most would be undertaken by the helicopter of the London Air Ambulance which flight time is usually at a maximum of 20 minutes, this is a stark contrast to some of the flight times recorded in trauma cases at the Royal Adelaide Hospital - which can be up to five hours. Lastly the disparity in training of personnel within the prehospital and critical care teams is a major factor. Whilst medical retrieval teams have been increasingly trained in intensive care and anaesthetics, I feel there is still a lack of neurosurgical interventions which may contribute to improving patient outcomes. For example neuro-trauma training of remote surgeons in Australia has occurred on a spurious basis. However overall I have undoubtedly seen huge advances in prehospital neuro-trauma in my training alone, and I have no doubt this will continue in the future.

Objective 2

The Royal Adelaide Hospital (RAH) is the major trauma referral center in South Australia. Subsequently the RAH Emergency Department is one of the largest in Australia, seeing around sixty three thousand patients annually. In terms of trauma incidence it deals with almost double the volume of cases compared to The Royal London but with a similar severity of injuries deemed by ISS scoring. These trauma cases are transported to the hospital via ambulance, helicopter and plane from the respective services of the South Australian Ambulance Service, MedSTAR and the Royal Flying Doctors. Trauma cases in this prehospital environment are triaged in a similar manner to that of the UK with varying categories of critical need.

Like the UK, the healthcare system in Australia is divided into public and private sectors.

However in contrast to the UK, the private sector plays a considerably proportion of healthcare service in general. In terms of trauma this is not overtly noticeable as this service is free at the point of care, thus the management of the patient is only changed when a patient is referred to tertiary care services.

Healthcare governance in Australia can be split between the local board, the state of South Australia, and the national government. This means that whilst there is an underlying coherence across states, there is also flexibility to cater for demand in the local area. One example I have witnessed is that of the MedSTAR service which is unique to South Australia in delivering prehospital retrieval services. Having attended the MedSTAR monthly clinical governance day during the placement, I was impressed by the commitment and vision of this service in South Australia.

Objective 3

Early recognition of the signs and symptoms of stroke we know is critical in ensuring that a person presents at hospital in time to receive acute treatment. This includes access to a stroke unit and treatment (mainly with thrombolysis) which can significantly improve their chance of an effective rehabilitation outcome. Since 2006 the National Stroke Foundation has run annual stroke awareness campaigns in Australia to help educate the public. The education is via the FAST (face, arm, speech, time) system which is similar to those run in the UK. However recent studies in Adelaide indicate that despite public campaigns there was limited awareness. The shortfalls in stroke service delivery in the state are currently being addressed by the Stroke Clinical Network. Offering and new initiatives such as thrombolysis to all eligible patients has been identified as a crucial priority for these patients. With regards to thrombolysis, prehospital triaging of thrombolysis is being implemented in South Australia. I have witnessed this in London with the development of specialised stroke centres and I feel that this is a key step in the right direction but requires significant changes in pre-hospital triage.

Lastly it is important to mention the role of stroke rehabilitation for these patients. The Royal Adelaide Hospital does not currently provide rehabilitation services with instead the Hampstead Rehabilitation Centre being the main facility in Adelaide. However I understand that acute rehabilitation services for brain injury will soon be avaliable in the Royal Adelaide Hospital allowing a holistic approach to a patient presenting to the emergency department.

Objective 4

In terms of working patterns emergency doctors at the Royal Adelaide Hospital work a maximum of 72 hours in every two week period. In contrast the UK the working week for junior doctors has been reduced on a gradual basis but it still reaches an average of 96 hours in the same 2 week period. These working hours have improved recently in the UK from older systems however I feel there still is a way to go. I feel that changes in work patterns of on-calls in the UK are needed to allow doctors to be in the right frame of mind when at work and make better decisions over the patients in their care. I have also observed that the in terms of Rota there seems to be more flexibility for taking time off in Australia compared to that in the UK. I think doctors here are lucky to have such good travelling opportunities both within their country and also in neighboring South East Asia. The opportunities for travel are completely different to the European cultures I have experienced surrounding the UK and seems appealing to myself if I chose to live and work here. Lastly there is a clear earning difference in Australia to that of the UK both in hospital and as a GP. Many doctors can earn up to three times the

salary of that of the UK. However within this figure we must account for the fact that the cost of living is almost double that of the UK average.