

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

The scope of this objective is large and thus I have decided to focus on the most poignant similarities and differences between the UK and Australia in respect to brain cancer epidemiology and my own experiences at the RMH. With regards to adults, most individuals are diagnosed with a primary brain tumour in middle age. The most common type are gliomas (astrocytomas and oligodendromas) and the most important feature of this type is that they are the most likely malignant type of primary brain tumour. In many respects the adult epidemiology of adult brain tumours is not significantly different to that of the UK. However in my time at the RMH I did get to see patients with a wide variety of brain tumours, both on the wards and in theatre. I was most impressed to see my first posterior fossa tumour surgery and it was a fascinating learning opportunity for myself. However the most striking aspect of the national figures is that paediatric incidence of brain tumours are much higher than that of the UK. Whilst I did not experience this on the elective - as the focus was on adult cases, it is an important reminder in the role of neurosurgical intervention. This is compounded by the fact that brain cancer is the leading cause of cancer death in young Australian people. Overall brain cancer is a devastating disease and its impact on individuals and their carers is undoubtedly great. Although it is not the most common disease, there is a substantial impact due to having a high loss of potential years of life. I have witnessed this on my placement at the RMH with patients post discharge requiring a substantial period of rehabilitation, palliation and support. Furthermore unlike other examples of cancer, which can be significantly reduced by modifying specific lifestyle choices, there still is a lack of data on most types of primary brain cancer to allow preventative strategies. One example is that adult onset gliomas in general do not vary with geographical regions in Australia, making this an ongoing challenge to understand and treat these patients. However new findings suggest that rates of paediatric mortality are slowing due to improvements in primary care referrals, thus systemic improvements to the healthcare system may have more immediate effects than identifying risk factors alone.

Objective 2

Neurorehabilitation worldwide is undoubtedly costly as these patients have complex needs over substantial periods of time. With regards to the Royal Melbourne Hospital there is a twenty-bed neurorehabilitation unit which comprises of a variety of multi-disciplinary teams that includes both hospital and community healthcare workers. Examples of some of the diseases in which the unit specialises in includes: stroke, traumatic brain injury, CNS tumours and degenerative neurological disorders. Of all the diseases encountered, stroke patients have the highest incidence and cost for neurorehabilitation services. This is because these patients are often the most elderly and thus have higher rates of systemic diseases. I have witnessed this with many cases on my elective and planning effective discharge can be a difficult task for the multidisciplinary teams. However the main difference to the UK service is there is a greater number of privatised neurorehabilitation services available in Australia due to the structure of healthcare coverage. This can potentially provide the patient with more autonomy over this rehabilitation period. However the process of neurorehabilitation is a new and continually evolving speciality, thus many therapies are still considered quite controversial and

there are wide ranging differences in practices exist. Whilst it is clear that more studies are needed on therapies, it is undoubtedly a complex process requiring both the best care possible and education for patients and the families affected. I feel that the most important interventions I have witnessed at the RMH have been from allied health professionals such as speech therapists, occupational therapy and nurses which help individuals reintegrate back into the community.

Objective 3

Sports related head injuries are a significant problem in society, both for professional and amateur participants. Whilst responsibility for educating the public relies on the professional sports governance bodies to facilitate this change, educational institutions also have a large role to play in particular the coaches at regional level. I believe that using the popular profile of sports such as Australian Football and Rugby League can be the most effective way to put a spotlight on the issue with regards to brain injury. Concussion injury forms the majority of these insults and will be the main focus of this discussion. Whilst the complete pathophysiology of concussion is not fully understood, there is a growing body of evidence which suggests that it can cause both short term but more importantly long term consequences for individuals. The long term effects include: psychiatric disorders, encephalopathy, dementia and other cognitive declines. Recognition of concussion by healthcare workers and patients alike can be difficult and thus estimates of incidence are unreliable in the literature. Thus there is a global consensus to develop standardised guidelines and public health awareness strategies on sport-related concussion injuries. There are high levels of anecdotal misinformation about the topic and it needs to be addressed urgently for the safety of all participants. In the long term large scale independent prospective studies are needed across collision sports to greater understand the effects but for now promoting its recognition is a start.

Objective 4

Firstly I believe one of the greatest privileges of becoming a doctor is the attainment of internationally transferable skills and thus employment opportunities are enormous.

Medical education at the University of Melbourne is a purely graduate course and is undertaken over 4 years much like the UK graduate scheme. After this prevocational training is undertaken over a 1-2 year period which is equivalent to the foundation programme in the UK. In contrast doctors are referred to as 'interns' within the hospital hierarchy during the first year and then Residents thereafter. After the first intern year application for full license is possible. After which the residential years are the next step. Around 2-3 years into their residency doctors then apply for specialist training programmes. I think one major advantage of training in Australia from a UK-based perspective is that the entry requirements for post graduate jobs are less restrictive than those of non-commonwealth countries such as the United States which require substantial entrance tests such as the USMLE. However in Australia to practise without conditions medical graduates still must complete the postgraduate Australian Medical Council examinations before applying to permanent hospital jobs.

In summary, I really enjoyed my neurosurgical placement at the RMH both on an educational basis and a personal level. If I were to return here to work it would be an absolute privilege.