

**Elective report Ronald Reagan UCLA medical centre (RR-UMC),
Westwood, Los Angeles (7th May-27th May 2012)**

The pattern of neurosurgical disease at RR-UCLA

As part of my elective period, I spent three weeks as a subintern under the neurosurgical team at RR-UMC. Working in this specialist neurosurgical referral centre allowed me to gain an appreciation of the spectrum of neurosurgical pathologies affecting both the local and wider population. The daily caseload had many similarities with neurosurgical centres I have experienced in the UK, with the diagnosis and management of suspected primary CNS neoplasms and metastatic lesions forming a large part of the case-load. Patients with CNS vascular pathologies such as aneurysmal, subdural and intra-parenchymal haemorrhage were also treated on the neurosurgical ward, with the management of aneurysmal bleeds shared between the neurosurgical and interventional radiology services. Spending time at RR-UCLA, however, allowed me to observe the management of adult and paediatric patients with rarer vascular pathologies such as Moyamoya disease and vein of Galen malformation respectively. It also gave me an invaluable opportunity to observe the management of paediatric neurosurgical patients with a variety of both congenital (vascular malformations, spina bifida) and acquired (hydrocephalus, gliomas) conditions. I was given the chance to assist in theatre on various occasions, and this allowed me to learn new skills for the first time and gain a greater understanding of operative neurosurgical anatomy. Being able to take call with second year residents was an invaluable learning experience. There was limited nighttime operative experience as there were few emergency cases when I took call, but observing the management of post-operative adult and paediatric patients at night was a valuable learning opportunity.

The pattern of healthcare provision in the US

The advantages and disadvantages of the US healthcare system as opposed to the system adopted in the UK have been widely discussed. I will therefore resist the temptation to write at length on US healthcare policy, but instead discuss my personal experience of the system at RR-UCLA and how this interfaces with the system as a whole. Healthcare provision in the US is provided by many separate institutions. Most of these are within the private sector, but there are also federal owned hospitals such as the veterans health administration (VA) facilities. This healthcare is funded mostly through private health insurance (36% in 2004), that for the majority of the working population is provided by the employer. The rest is funded through: individual out of pocket expenses, federal schemes such as Medicare and Medicaid (34%), state schemes, and through other private funds (11%)¹. Such a system has resulted in some stark statistics. A 2007 US census study showed that 15.3% of the population, some 45.7 million people are without any form of health insurance². The federal systems in place such as Medicare and Medicaid have eligibility restrictions, so no system offers universal coverage.

These figures are despite an OECD report showing that the US spends 15.2% of its GDP on healthcare (2008), the highest in the world, and a sum large enough the OECD says to provide primary health coverage for the whole population³. Such a system has been argued to create various problems. Under the Emergency medical treatment and active labour act (EMTALA), all participating hospitals, ie those in receipt of any federal funding through medicare/Medicaid, must provide emergency medical treatment regardless of citizenship, legal status or ability to pay. Hospitals can only transfer/discharge such patients with their informed consent or if another facility is offering better medical provision for their condition, and there is no system of funded follow up primary care. Furthermore, there is no formal federal reimbursement for such care, meaning that in many parts of the US emergency care units are overstretched and underfunded, with some arguing that some of this cost is passed onto paying patients resulting in insurance premium inflation.

How does this contrast with my personal experience at RR-UCLA? The standard of care I saw delivered to patients was in many ways superior to the care offered in the UK for non-emergency cases. Furthermore, the time between the patient being referred for treatment and the actual treatment appears considerably shorter in the US. In the UK the median for outpatient referral to treatment time(RTT) is 8.7 weeks with 97.1% of outpatients being treated within 18 weeks⁴, with neurosurgery and orthopedics having traditionally the longest waiting times⁵. In contrast, the waiting time in RR-UCLA was significantly shorter, with the majority of patients I saw receiving definitive surgical treatment within a few days of referral. The increased referral time is not the same for every neurosurgical pathology. Since the NHS cancer plan in 2000, the UK has improved the time for suspected cancer referrals, imposing a two week limit from initial suspicion to specialist consultation. This limit is generally accepted and met⁶, but for non-cancer patients there is clearly more that can be done to shorten waiting times. Another noticeable difference was that at RR-UCLA medical centre, inpatient cross-specialty referrals appeared to occur more rapidly with ophthalmology consults occurring the same or next day for example. From my anecdotal experience, this is usually not the case in the UK, but there is variation amongst trusts. In general, the ward environment was more pleasant for patients at RR-UCLA, each patient has an individual room with space for relatives to stay. Access and usage of radiological investigations appears greater in RR-UCLA compared to neurosurgical centres, I have rotated through in the UK, and having necessary radiological tests performed early certainly contributes to shortening patient stay.

Neurosurgical training in the US vs the UK?

One significant difference is the organization of neurosurgical residency training in the US compared to specialist training in the UK. From my perspective, the US training system is superior in some aspects. In contrast to the US where the maximum working week is 80 hours for trainees, the adoption of the European

working time directive (EWTD) in the UK stipulates that neurosurgical trainees cannot spend more than 48 hours working in a 7 day week, and that there must be an 11 hour break in every 24 hours worked. This along with the subsequent SiMAP (Sindicato de Medicos de Asistencia Publica) legislation, which counts time asleep as work, means that UK trainees spend less time than their US counterparts in hospital, and senior residents/registrar in the UK are forced to adopt a shift pattern of working as opposed to a traditional US style on call system⁷. As such the EWTD has been met with some criticism regarding its effect on surgical training in Europe⁸. The problems it creates are twofold. Firstly, the large ward based responsibilities of junior trainees along with the EWTD limits surgical exposure, meaning necessary surgical skills are acquired much later, necessitating longer training programs (8 years in UK vs 6 year residency in US). Secondly, some studies have shown that the on call shift pattern in the UK is either not adopted, and in places where it is adopted the satisfaction of trainees in terms of patient safety, skill acquisition, and work-life balance is perceived as lower than if a US style system was adopted⁹.

¹ Health, United States, 2007. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. CNNR6N6638A Page 1 5/24/2012CNRR6N6638A

² Income, Poverty, and Health Insurance Coverage in the United States: 2007." U.S. Census Bureau. Issued August 2008.

³ Gerard F. Anderson, Uwe E. Reinhardt, Peter S. Hussey and Varduhi Petrosyan, "It's The Prices, Stupid: Why The United States Is So Different From Other Countries", *Health Affairs*, Volume 22, Number 3, May/June 2003. Retrieved February 27, 2008

⁴ <http://www.guardian.co.uk/society/2012/apr/19/nhs-patients-waiting-18-weeks-rises>

⁵ <http://www.guardian.co.uk/society/2009/may/28/nhs-waiting-figures>

⁶ Comparison of time taken from initial presentation to histological diagnosis of GlioblastomaMultiforme (GBM) in Birmingham, United Kingdom and Strasbourg, France. Ammar Natalwalaa, Viren Bharkhadab, Georges Noelc, Garth Cruickshank

⁷ Current neurosurgical trainees' perception of the European Working Time Directive and shift work JO Farah - British Journal of Neurosurgery, 2008 - Informa UK Ltd UK

⁸ The European Working Time Directive and the effects on training of surgical specialists (doctors in training)—a positionpaper of the surgical disciplines of the countries of the EU. *Acta Neurochir (Wien)* 2006;148:1227 – 33.

⁹ Current neurosurgical trainees' perception of the European Working Time Directive and shift work JO Farah - British Journal of Neurosurgery, 2008 - Informa UK Ltd UK