ELECTIVE (SSC5b) REPORT (1200 words)

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

Elective Report Year 5 MBBS Paediatric Orthopaedics, Royal Children Hospital (RCH) Melbourne

Elective period: 26th March- 20th April 2018

Objectives:

1. What are the prevalent Paediatric Orthopaedic conditions in Australia and how do they differ to the UK?
2. How does the typical patient care at RCH differ from the specialist Paediatric centre in the UK e.g. royal London and GOSH?
3. How Orthopaedic funding for treatment in Australia differs to the UK?
4. How RCH has changed my personal and professional development?

Introduction:

I have always had a strong interest in Paediatrics. During medical school we had very minimal exposure to Orthopaedics and with both foundation jobs often having a rotation in Orthopaedics & trauma or A&E, I thought it would be an invaluable opportunity to familiarise myself more with this speciality, or at least the terminology used. Therefore, I spent 4-weeks with the Orthopaedic team at the RCH to gain more Orthopaedic exposure in my favourite patient population. RCH is a world-renowned tertiary centre and provides the best health care services for both inpatient and outpatient care through its multi-disciplinary teams. RCH provided a wholesome and enjoyable learning experience through its friendly and enthusiastic surgical team and its diverse and rare patient groups and cases.

1. What are the prevalent Paediatric Orthopaedic conditions in Australia and how do they differ to the UK?

Knowing that children do not fully understand the risks involved in high-risk activities that can lead to trauma and the underlying physiology of childhood bones being softer growing bones, I was expecting to observe a greater level of paediatric trauma cases on a day-to-day basis. However during my observation period, I was surprised that Paediatric orthopaedics mainly revolved around cerebral palsy, scoliosis/neuromuscular scoliosis and congenital orthopaedic conditions. However, two most prevalent Orthopaedic conditions noted compared to the UK, were ACL/sporting injuries and osteomyelitis. Additionally, the way neuromuscular scoliosis was managed in Melbourne.

In clinics I noted that there was widespread participation of organised sports from a young age and competing at a high level. In Australia it appears that there is a culture of participating in a) extreme sports e.g. BMX biking and water sport activities b) physical competitive contact sports e.g. Australian football (which is a cross between American football and rugby, so that I have heard) c) being very active and doing a variety of sports a week. From clinic it appeared many children have a minimum of 2 elite sporting hobbies a week that has vigorous training programmes. Additionally, this culture was made obvious to me especially in fracture clinics as often the burning question is, when can I start doing sport again? Even explaining another 3 weeks rest would usually cause emotional turmoil. Due to this culture being more prominent in Australia than the UK, ACL injuries are for more prevalent in Australia as children and adolescents are participating in more competitive and extreme sports from a young age.

Literature has revealed that mainly Australia have conducted studies in Paediatric ACL injuries. ACL reconstruction have tripled in the past 15 years, which doesn't include children who have had ACL injuries that have no undergone surgery; missed diagnosis and those treated in the public system (Griffith, 2016). Greater demands are being placed on young athletes through increased training, early sports specialisation and greater emphasis on year-round competitive play. Additionally due to advances in technology e.g. MRI it has improved our diagnostic ability. These factors have therefore led to a greater increase in the diagnosis of sports-specific injuries in children and adolescents (shaw et al, 2017). A particular study showed the epidemiological trends of hospital admitted ACL injuries between 5 to 14 years old. Using the Vicotrian admitted episodes dataset it demonstrated that over a 20-year period from 2005-2015 there was an increase in the annual rate by 147.5%. In 2005/06 there were 2.74 per 100,000 and in 2014/2015 increased to 6.79 per 100,000. 96.9% were between 10 to 14 year olds. The study also showed 56.6% were sports related ACL injuries. With the increase in ACL injuries there has been a cause of concern as it can cause decrease level of physical activity in the long-term, which could contribute to obesity (shub d et al, 2011) alongside other complications e.g. arthritis increasing health care costs. Literature also revealed that there is urgent monitoring required to monitor ACL injuries in the Paediatric population for the development of prevention policies that may be needed e.g. neuromuscular training programmes to be implemented in junior sports teams.

There are also major differences in the engagement of compulsory sporting development between UK and Australia, which further contributes to the prevalence of ACL injuries in Australia compared to the UK.

School's in Victoria must minimally engage in physical and sports education for the mandated times below:

Primary school: 20-30 minutes PE/ day

Grade 4-6: 3hrs/ week of PE

Secondary school yr 7-10: 100 minutes/ week for PE

Where schools offer: Australian football, Rugby, Basketball, Soccer, netball (all high risk sports) Swimming, Tennis and soft ball etc

School's in the UK:

Have a different approach to PE. Children till the age of Key stage 3 (8-9 years old) don't have a main focus on competitive sports, more of an approach of developing fundamental movement and flexibility skills and working well in a team. This is achieved through dance, games, athletics and gymnastics

The ranges of sports offered are badminton, basketball, cricket, football, hockey, netball, rounder, rugby and tennis.

Nocte: It was fascinating to be part of the forefront of a new surgical technique to improve neuromuscular scoliosis bipolar technique. This method is only so far trialled in France and RCH. This new surgical technique for scoliosis correction is less invasive, decreases the duration of surgery, blood loss and complications. So far a large handful of patients have been treated with methodology and all have been a major success. Something the UK should look into.

2. How does the typical patient care at RCH differ from the specialist Paediatric centre in the UK e.g. royal London and GOSH?

The typical patient care at the RCH does not differ vastly from the leading Paediatric centres in the UK, as both countries are leading developed nations in healthcare. An example: cerebral palsy care. In RCH clinics, there were a team of healthcare professionals that were well trained in helping with children with cerebral palsy. These included doctors, nurses, physiotherapists and orthotics. At RLH our appointments also involved the home liaison team who relayed the doctors feedback regarding the care that was required at home. It was wonderful to observe the MDT in action and watch different team members voice their concerns and how that should be considered before finalising a management plan. Although MDT care is a key player in delivering modern medicine, it is particularly unique to the care of these patients. In both Australia and the UK it is not common to watch active MDT interplay in a clinic setting. I observed that holistically cerebral palsy patients have better outcomes in Australia compared to the UK as in Australia these patients are monitored more closely from birth.

Additionally the standard of care in Australia and UK are more or less identical, all doctors demonstrated listening and empathetic skills and are working together with the parents and the child to ensure their needs are met and act in the best interest of the patient. I have noticed that the transition from adolescence to adulthood is not as strict in Melbourne, as in clinic I encountered many 18-year-old patients still visiting their surgeon, Whereas in the UK the organisation for transition to adult care starts at age 15.

Overall, it was apparent that there was a lot more funding provided to the RCH compared to Paediatric centres in the UK. The RCH has made a real conscious effort to how to make a hospital a place not be feared of. The architecture of the hospital, the layout was also simple and warming to families. In particular the unique meerkat zoo, aquarium and Mcdonalds all situated in the hospital really highlights how this is a world leading centre. This perhaps, although a superficial note, how the UK can improve to make hospitals a place not to be feared.

It was particularly interesting to see how everything is electronic and that the communication between secondary care and primary care was far more efficient, as letters were sent straight away post appointment, whereas in the UK patients often have to hand in a letter to the GP themselves directly.

3. How the health provision in the UK differs from Australia?

In Australia, overall the general public that have permanent residence have adequate and easy access healthcare. All Australians are covered by Medicare which is a tax-financed health insurance scheme. The scheme will also rebate against cost of medical fees. Medicare provides free or reduced costs for certain services. All Australians regardless of income have access to Public hospitals without charge and major academic medical centres are all public hospitals. However, unlike the UK out of pocket costs can still incur as doctors are allowed to charge at their discretion. 30-40% of Australians have private hospital insurance for access to private healthcare, which is often revolved around elective procedures.
State governments are the managers for hospitals and they control the planning, regulation, funding and governance of public hospitals. All states pay for public hospital care using activity based funding, where the price is set for the different categories of treatment. However, the national body (the independent hospital Pricing Authority) sets a national price for each type of care both within and out hospital.

4. How RCH has changed my personal and professional development?

The RCH has simply been the most valuable learning opportunity. Every doctor I observed demonstrated spectacular bedside manner. Their years of experiences and high-quality training were really demonstrated through their body language and communication skills with their patients. Their skills are something I hope to adopt in becoming a competent doctor. It was particularly interesting to observe the Orthopaedic training programme through the registra and consultant interaction. Consultants were very keen to teach and often encourage registras to come up with their management plan before giving their

opinion. A lot of constructive criticism was delivered yet it is a process of moulding the clinician to deliver the most optimal care. I believe this is a great way to learn and due to the time pressures experienced in the UK this is not often seen.

The biggest learning point for my own personal and professional development is that severe disabilities can cause emotional, physical and financial distress on families. A particular consultant asked me "if I believed in angels?" my reply was "no", yet he explained me to that in clinic we were surrounded by them as it requires a lot of mental and physical strength to care for these children. For these families even the smallest operations that may not improve independency, will drastically improve the comfort of the child and relieve the worries the parents have for their child e.g. knowing that their child is sitting more comfortably in their wheelchair. With all the junior contracts malarkey in the UK it sometimes detracts the real reason of why I chose to be a doctor. This experience reignited my passion and how my vigorous training programme is to provide that betterment for those in need.

Children can present with a spectrum of challenging behaviour and how to handle the situation. A particular example is when a patient needed stitches removed post op to help with healing and if left in it would worsen the infection site. When the doctor suggested removing these stitches. The child was very distressed, crying and refusing this procedure to be done. The doctor managed the situation very well by trying to explain its pain free, the benefits of removing them today instead of letting them fall out. After that the child still refused and continued crying. Yet the doctor and the nurse knew the importance of taking them out today rather than let it naturally fall out. Therefore, approached the explanation benefit of removing the stitches at many different angles. After exhausting all the options the doctor said "you're big girl now, I am not going to force you." This phrase really bought the patient on side and after a few more tears she agreed for the stitched to be removed. Even though the removal was a battle and involved a few more tears and screams. The doctor was not phased through the ordeal and the removal will benefit the patient and prevent further complications. I learnt that from this experience that you must not be phased through the lack of cooperation of the child and learn tactful persuasion techniques as you are acting in the best interest of the patient.

References:

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