ELECTIVE (SSC5c) REPORT (1200 words)

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

Paediatric respiratory medicine at British Columbia Children's Hospital

Vancouver is a vibrant city on the east coast of Canada, a coastal seaport in mainland British Columbia. It provides residents with both the perks of city life with bustling downtown and ease of rural life with expanses of greenery and nature. During the last census in 2011, the population of the province was recorded at over 600,000 people, making it the most populous metropolitan area in the country. Vancouver is diverse with different cultures and cuisines, being named the culinary capital of Canada1.

The health system in Vancouver and Canada as a whole is different to the UK. The government provides basic healthcare services, or Medical Services Programme (MSP) under the Medical Protect Act. This requires all residents of British Columbia. The medical service plan is a provincial insurance programme. The organisation that a person is affiliated with buys packages from a private healthcare provider. Different insurance companies offer different health benefits. The MSP cover includes clinic appointments and services provided by professionals like physicians and midwives as well as diagnostic services such as x-rays and laboratory tests2. The MSP system of care is centralised; all BC residents carry a service card on their person and can access healthcare and prescriptions without the use of paper.

Describe how paediatric health services are organised and delivered in British Columbia in contrast with the UK.

General practitioners are part if the healthcare system as in the UK. However, in Canada, the GP may not be the first point of contact for patients. In the UK, parents take their children to the GP and are referred on to secondary care. Paediatricians then provide a secondary and tertiary care service based on referral. However, in Canada doctors are able to open practice in the community. This means that parents can take their child to see their paediatrician as one would go to their GP in the UK. The link between family doctor practices and outpatient pediatricians places less pressure on hospital resources. British Columbia Children's Hospital is the only children's hospital in the province of BC. It is a tertiary centre, meaning that the patients seen there are specialised and have been filtered down the system.

Describe the prevalent paediatric respiratory conditions seen in British Columbia. How do they differ from the UK?

By far the most common respiratory condition that I saw at British Columbia Children's Hospital was asthma in outpatients and bronchiolitis on inpatients. These are similar to what I had been exposed to in the UK. However, I think that the prevalence here appeared much greater to me as I was part of multiple asthma clinics everyday. In these clinics, I was able to see how varied the first presentation of asthma can be as well as the different levels of control of the disease. I also saw a lot of children with cystic fibrosis, bronchiectasis (CF and non CF related) and primary ciliary dyskinesia. This is in contrast to the UK where there has been a handful of children with CF. I had the chance to admit and follow through children with CF, which allowed me to appreciate the process of diagnosis and always

keeping it in the back of your mind when working someone up for recurrent chest infections or failure to thrive.

Compare how a particular paediatric respiratory condition is managed in British Columbia Children's Hospital (BCCH) in comparison to the UK guidelines.

In the UK, the main leading guidelines used in the treatment of asthma are produced by the British Thoracic Society3. The guidelines are broken down into asthma diagnosis, management of the chronic condition and management of the acute exacerbation. My experience of asthma management in BC is similar, however the Canadian guidelines4,5 have more scope for individual practice than I expected. In the emergency setting acute exacerbations, both countries use the same choice of medications- salbultamol, ipratropium, steroid, magnesium sulphate. However, in a clinic setting, management of the control of asthma in order to prevent both frequency and severity of exacerbations, clinicians each have their own methods. Sitting in one clinic with an attending, I saw that Advair (a combined long acting beta agonist and inhaled corticosteroid) was preferred; sitting in another clinic, Flovent (inhaled corticosteroid alone) was used in addition to the Ventolin. I realised that practices and decisions in management varied with experience with each clinician's subset of patients and what has worked for them. I agree to an extent with some of the practices here as I have realised that asthma affects everyone differently- triggers vary and one type of medication may not work the same way in two patients.

Personal development goals: Improve and adapt the skills I have developed where appropriate. Discuss and reflect on an interesting case seen in Paediatrics. Reflect on how the elective placement has prepared me for life as a foundation doctor. Has it made an impact on future career aspirations?

My first respiratory consult when I was working on inpatients was for a 9 month old baby girl (Baby A) with partial trisomy 18, admitted for bronchiolitis requiring a short period of ventilation. The respiratory team were consulted because the medical team were concerned about apnoiec episodes when she slept and whether this was a central or obstructive case. The question posed to the team was the need for non invasive ventilation. A pulse oximetry study was done and she had concerning desaturations into the 40s with self recovery.

When I spoke to the mum and her partner, I realised that getting a concise history was very difficult as mum had an intellectual disability and was very reliant on her partner for information; raising the issue of capacity to consent and make decisions for the baby's care. I also got the sense that the family did not appreciate the seriousness of baby's condition, not understanding that she may never walk or talk and these apnoeas could cause death.

I found this case really interesting from a complex care perspective. Medically speaking, Baby A was visibly hypotonic and dysmorphic with obvious abnormalities with her breathing. I witnessed one of her apnoiec episodes and it was clear that it had both a central and obstrucitve element. However, there were so many other factors to consider with regards to the support available for the family and access to healthcare, in conjunction with what was actually in the best interests of the child. I was present at many meetings involving various health care professionals about how best to manage her

care. Baby A and her family were from a reserve in a remote area where access to healthcare was limited and so decisions needed to made about the extent of intervention and her quality of life.

It was both harrowing and difficult to learn that the best thing for this baby was not doing everything medically possible to keep her alive. For example, it may have been necessary for her to be ventilated at home and fed through tubes. However, all the enjoyable things in life would be taken away from her and realistically the goal was making her short time as comfortable and enjoyable as possible for both her and her family. I admire the professionals who have to make these decisions in terms of ethics and quality of life. I found this case very emotionally challenging and it was a humbling experience to learn the importance of a team in a complex case like this.

I think I have always struggled with the concept of becoming a doctor; always feeling inadequate do the job or not knowing enough to be able to make decisions. This placement has been very challenging on many levels. I felt particularly out of my depth my first day on call. I was not familiar with the system or how things were done on the ward. It was a very steep learning curve for me. It took a while for me to find my feet and prioritise my jobs as I had a lot to do and a lot of patients to se.. The experience tested both my time management skills and my ability to deal with situations as well as knowing when to contact my senior. The following on call days were much easier once I had orientated myself with the wards and the computer system.

Before starting this placement, I knew that I had always enjoyed paediatrics but that I would pursue a career in adult medicine. However, I have enjoyed the rotation so much that I would reconsider the specialty as a future career. I think that a large part of that opinion is based on the fact that I had such a friendly team who welcomed me with open arms and included me in meetings and discussions. I felt like a valuable member of the team and that I could contribute to handover. Overall, despite the intial challenges, I feel that the placement is an invaluable experience and will imapct on how I perform in my career. Not only have I learnt about paediatric medicine but I have also learnt a lot about myself and how I cope with pressure and responsibility. As a result, I hope that my first experience working as a doctor will be made slightly easier as I am aware of the limitations and expectations placed on a new doctor.

References:

1. Vancouver census 2011. Statistics Canada. Available: URL http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/hlt-fst/pd-pl/Table-Tableau.cfm?LANG=Eng&T=303&SR=1&S=51&O=A&RPP=9999&PR=0&CMA=933 [Accessed 26/3/15].

2. British Columbia Health. Available as: URL http://www2.gov.bc.ca/gov/topic.page?id=239FC60D45274CA59FCDF001A2F89899 [Accessed 27/3/15].

3. British Thoracic Society Guidelines on the management of asthma. Available as: URL https://www.brit-thoracic.org.uk/document-library/clinical-information/asthma/btssign-asthma-guideline-2014/ [Accessed 27/3/15].

4. Canadian Thoracic Society. Available: URL http://www.respiratoryguidelines.ca/guideline/asthma#pediatric-guidelines-and-standards- [Accessed 28/3/15].

5. Global Initiative for Asthma. Pocket Guide for asthma management and prevention Available: URL http://www.ginasthma.org/local/uploads/files/GINA_Pocket_2015.pdf [Accessed 28/3/15].