ELECTIVE (SSC5b) REPORT (1200 words)

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

I've learned a considerable amount from this elective, working at the British Columbia Cancer Agency. From this elective, I've learned about the prevalence of different cancers within Canada, especially head and neck cancer, which is normally diagnosed when a patient experiences sudden onset conductive hearing loss, and how the typical patient is a middle aged, Asian gentleman. The British Columbia Cancer Agency specializes in breast cancer, with many cases from other provinces being referred there due to their expertise and specialist equipment e.g. a prone stereotatic core biopsy table, allowing biopsies to be taken from close to the chest wall with considerable precision and safety. The number of new cancer diagnoses in British Columbia has been steadily on the rise since records began, with the number of new cancer diagnoses in 2021 reaching 30,000. However, compared the rest of Canada, British Columbia is among the provinces with the lowest incidence of Cancer (462.7 per 100,000 in 2023, compared to the highest incidence in Nova Scotia, which had an incidence of 557 per 100,000). The age standardized rate of cancer in Canada is lower than that of the UK (the UK was 296.1, whereas Canada was 287.4), and was lower than a number of European countries like France and Belgium, as well as the USA. Between 2011 and 2015, the most commonly diagnosed cancers were prostate, female breast, colorectal and lung. Around half of new lung cancer diagnoses were diagnosed at stage 4, with this stage of cancer being more commonly diagnosed as small cell lung cancer rather than non-small cell lung cancer. Nearly 75% of prostate cancer, and more than 4/5^{ths} of breast cancer diagnoses were made at either stage 1 or stage 2. Roughly 50% of colo-rectal cancers were diagnosed at either stage 3 or stage 4. Later stage cancers were more common in this period in older age groups than younger age groups.

Canada demonstrates a lot of similarities with the UK when considering health provision, with a free at point of delivery healthcare system. Whilst the NHS is run nationally, the Canadian healthcare system is divided geographically, with each province running its own separate healthcare system. This means that, whilst in the UK moving house does not affect your healthcare coverage, with patients simply needing to sign up to a new general practice, if you move provinces in Canada, you have to ensure you sign up to that province's single payer insurance to ensure proper coverage. Similarly to the NHS, the Canadian healthcare system also doesn't always cover dental or vision problems, and sometimes won't cover particular medication due to factors such as cost. Obviously, this means that the Canadian healthcare has similar limitations and weaknesses to the NHS, as the provinces must choose what medication they are willing to cover, and what treatments can be made available. Decisions must be made about whether medication and treatment should be made available on the healthcare system, and are based on the effectiveness of the treatments, how many patients this would be able to help, and the cost of the drugs. Whilst this allows a majority of people to access healthcare that they require, a patient's quality of life is heavily affected by the market value of potentially life changing medication (which can be changed at any time by a company), as well as a board of people who decide whether or not it is cost effective for this treatment to be made available. However, it does also allow patients to access healthcare without any financial burden for a majority of the time, unlike the American healthcare system, which leaves the entire financial burden on the patient, often eclipsing their earning potential. The private healthcare sector here seems, at least in my experience, a much smaller market when compared to the market in the UK.

Radiology in Canada does seem to demonstrate some similarities to the UK, using similar software such as CERNER and powerchart, allowing me to adapt to the different system with very few issues. However, Canada does have software called CareConnect, allowing health records from other regions of Canada, as

well health records from other countries being accessed by health care professionals, which allows as much information as possible to be gathered about a patient's history. I noted how useful this was particularly with one of the cases I made a presentation for, where a patient received some CT scans after noticing they had unusually watery eyes. These scans were available within the system and had been imported into the same software they used for the scans they did within the hospital, allowing radiologists to compare the images taken previously in another country to the most recent scans. The more integrated nature of the Canadian healthcare system allows patients to have a more effectively delivered continuity of care, as well as optimizing the access healthcare professionals have to a patient's history, ensuring that the most informed clinical decision can be made. I think a more integrated system for health record within the NHS would be incredibly useful, as I have often experienced hurdles to accessing patient medical information when they have been treated at other hospitals, despite still being treated in the NHS.

I learned about how the residency program works, in comparison to specialist training in the UK, the intensity of the healthcare program, and how at points it interacted with the American residency program, including taking some of the same formative exams, despite differences in the teaching programs (Radiology and nuclear medicine is separate in Canada, whereas they are combined in the USA). I learned about the dedicated weekly teaching on reading imaging, as well as teaching on physics, which I had not encountered before. The residency program has a much shorter pathway than specialist training, although in Canada you must do a degree before starting medical school, which is normally 3 or 4 years. This shorter training time means that doctors spend more time as 'staff' doctors. I also learned about how difficult it is for foreign doctors to apply for residency within Canada, as anecdotally I heard that Ottowa only accepts 2 foreign doctors to a radiology residency position, and I did not meet a foreign radiology resident in my time at the University of British Columbia.

My knowledge about how to read MRIs and CT scans, as well as how contrast can change images, has significantly increased, and I feel I am now more confident reading these images. I also feel like I have developed a greater understanding of how the specialty works, as well as how the residency program works.

Overall, I think this elective has been a thoroughly enjoyable experience on my radiology elective in Vancouver. I have learned a considerable amount about the healthcare system in Vancouver, what radiology is like as a specialty, as well as what the residency program is like for radiologists in Canada. I have a much deeper understanding about the country, what it is like to work here, and the difficulties with applying as a foreign doctor, which shall allow me to make an informed decision later in my life, when I consider working in Canada as a doctor.