ELECTIVE (SSC5b) REPORT (1200 words)

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

This elective report comments on my time spent with the Plastic and Reconstructive Surgery team at Harlem Hospital Center in New York, which I was fortunate enough to be able to join as part of Barts and The London School of Medicine and Dentistry's elective exchange programme with the Vagelos College of Physicians and Surgeons at Columbia University – a prestigious Ivy League institution.

I spent one month with the Plastic & Reconstructive Surgery team at Harlem, under the supervision of my excellent supervisor, Dr Ryan Engdahl. During the rotation I gained a fascinating insight into plastic surgery as a specialty, partook in operations and learned surgical skills, and learned a significant amount about how healthcare is delivered in the US.

Harlem Hospital Center is a New York publicly funded hospital. In the United States only 21% of hospitals are publicly owned, which is very different to the UK, where the vast majority of healthcare is delivered through the government owned National Health Service. The remaining hospitals in the US are owned by private for-profit, and not-for-profit, organisations.

The United States spends a higher proportion of its gross domestic product (17.8% as of 2015) (1) on healthcare than any other country in the world. Of this expenditure approximately 64.3% is directly or indirectly taxpayer funded, often through mandatory insurance schemes (as of 2013) (2). The UK for comparison spends 9.9% of its gross domestic product on health care (3) of which approximately 80% is government financed (3).

During my placement I was able to partake in a wide variety of procedures and cases and received plenty of operating room time where I was able to assist, and practice and learn new surgical skills. At Harlem Hospital Center the Plastic and Reconstructive Surgery service covers a wide range of acute conditions and presentations, such as burns, hand fractures and tendon injuries, as well as procedures such as removal of excess skin and adipose tissue, and cosmetic procedures.

At Harlem Hospital Center one of the procedures I saw most frequently performed by the plastic surgery service was a panniculectomy, which is removal of excess skin from the abdomen following weight loss. Many of these patients were patients who had undergone a previous bariatric procedure, usually a sleeve gastrectomy, or Roux-En-Y bypass. Where these procedures are a success, patients lose a vast amount of weight, often 50% or more of their total body weight, and after this weight loss have a significant amount of excess skin - commonly at the abdomen, upper arms and thighs. Obesity is a well-publicised public health issue in the US – more than one third of US adults have obesity (38.2%) (4). This has led to increasing demand for bariatric surgery to aid weight loss in the morbidly obese, with sleeve gastrectomy being by far and away the most commonly performed operation across the US (5). For comparison in the UK, 26% of adults are classified as obese (6), the highest rate of adult obesity in any western European country. Current projections by the OECD suggest that adult obesity rates could reach almost 50% in the US by 2030, and 35% in the UK within the same period (4).

It seems then that in both the US and the UK the demand for bariatric surgery is due to continue to rise with rising rates of obesity, and the associated health impact a high BMI can cause. It also follows that many of these patients will seek plastic surgery following their potential weight loss procedures and the demand for plastic surgery services will also rise.

Another important aspect of plastic surgery as a specialty is operating in acute cases, such as burns, fractures and compartment syndrome. When patients present to the plastic surgery service at Harlem, time can be a critical factor, particularly when operating on patients with severe burns or compartment syndrome. These patients often present via the emergency services, which are structured differently in the US to the UK.

In the US many ambulance and paramedic services are privately operated. In the City of New York, the Fire Department are trained as first responders and are trained to transport patients in extremis to a local emergency department. All hospitals are required to provide initial treatment to all patients who present to their emergency department, however depending on the hospital, they may need to seek further treatment elsewhere if they are not covered by health insurance. Anecdotally, I have been told that this can mean that patients without health insurance can present to the emergency room for a wide range of issues, that could be feasibly treated elsewhere if they were able to access other services. However, even in a free at the point of care system like the National Health Service in the UK, the volume of medically unnecessary Accident and Emergency visits is also an issue. This can also cause issues with patients seeking appropriate treatment for medical or surgical conditions at an earlier stage where they are more easily manageable, often waiting until they become serious enough to warrant an emergency department visit.

When patients were treated by the plastic surgery service at Harlem, I was fortunate enough to be able to frequently follow up with patients days or weeks after their operation in outpatient clinic. Examining patients in clinic helped me to hone my clinical examination skills and my knowledge of dressing, wound care, and removing sutures. By assisting with clinics, I soon learned that one of the frustrations for the plastic surgeons at Harlem was when patients failed to follow up following an operation or procedure, which given the local demographic of patients, happened more frequently at Harlem than at other hospitals. I also learned about the challenges that face surgeons in the post-operative period, such as pain control, which is particularly topical at the moment in certain parts of the United States given the "opioid epidemic", and how surgeons have problem solved to be able to provide new solutions to these issues.

Overall during my time spent with the Plastic and Reconstructive Surgery team at Harlem, I gained a fascinating insight into plastic surgery as a specialty, healthcare in the US, and the challenges and rewards of providing healthcare for Harlem's unique demographic group of patients. I had a wonderfully welcoming team who really went out of their way to involve me in procedures in the OR, and they were always willing to teach me where I needed additional knowledge or skills in order to engage fully. I leave the rotation feeling far more comfortable in my basic surgical skills, more knowledgeable about what I want to do, and ever more convinced that surgery is the route I wish to take my future career. I've also learned that although some things are different abroad, such as drug names and clinical roles, I've been able to get by and contribute to the team. Perhaps that says that ultimately wherever you go in the world, the medicine and science that underlies everything is at least to some extend fundamentally the same, and it gives me confidence in my own skills to practice medicine and surgery in a variety of environments in the future.

References:

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2. Himmelstein, DU. Woolhandler S. "The Current and Projected Taxpayer Shares of US Health Costs". American Journal of Public Health 106, no.3 (March 2016): pp. 449-452.

3. Office for National Statistics. "UK Health Accounts: 2015" (2017). URL: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthcaresystem/bulletins/ukhealthaccounts/2015

4. The Office for Economic Co-operation and Development. "Obesity Update 2017" (2017). URL: https://www.oecd.org/els/health-systems/Obesity-Update-2017.pdf

5. The American Society for Metabolic and Bariatric Surgery. "Estimate of Bariatric Surgery Numbers, 2011-2016" (2016). URL: https://asmbs.org/resources/estimate-of-bariatric-surgery-numbers

6. NHS Digital. "Statistics on Obesity, Physical Activity and Diet – England 2018" (2018). URL: https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-obesity-physical-activity-and-diet/statistics-on-obesity-physical-activity-and-diet-england-2018

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