

## **ELECTIVE (SSC5b) REPORT (1200 words)**

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

**Great Ormond Street Hospital (GOSH) is a world-renowned specialised hospital that is known for its leadership in research, development, education and excellent delivery of paediatric care(1). Hence, the cases seen at GOSH tend to be more complex and rare compared to other NHS Hospitals. This was noticeable when attending a vast amount of reporting sessions and MDT meetings in a wide range of specialities including nephrology, urology, neurology, neuro-oncology, skeletal dysplasias and infectious disease. I came across conditions which I have never seen before, including choroid plexus carcinoma, gliomas, Gorlin syndrome and craniopharyngiomas. By attending several skeletal dysplasia meetings I was able to observe extremely rare conditions, and in some instances, the radiologist was unable to come up with a diagnosis – reflecting the uncommonness of the conditions.**

**Furthermore, I had an excellent time shadowing the interventional radiology team. During the neuro-interventional list, I encountered a patient who underwent a procedure for a Vein of Galen Malformation (VGM), a condition I have never heard of before. This condition is so rare that there are only around 10 children with this diagnosis each year(2). This reflects the nature of conditions that are encountered at GOSH because it is a specialised centre, and is less likely to be the case for other less specialised hospitals. For instance, from my radiology experience at Whipps Cross Hospital, the paediatric conditions observed there were not as rare as in GOSH.**

**The radiology department is the cornerstone of any hospital as it provides the important tools to support other physicians with the diagnosis and management of patients. Hence, a well-organised radiology service will help to improve patient care. Generally, the radiology department is split into two: diagnostic and interventional radiology. From my experience at GOSH, I was able to gain a greater insight into how both departments function in order to provide excellent quality services.**

**The diagnostic radiology department consisted of highly qualified and specialised radiologists with expertise in fields like neurology, neuro-oncology, trauma, cardiothoracic, gastro/urology, skeletal dysplasia and intensive care imaging. This department is responsible for interpreting images requested from all around the hospital. There are different departments including CT, MRI, Nuclear Medicine and Ultrasound department which provide high-quality images for the population served by GOSH. The facilities available differ from one hospital to another, for instance, smaller hospitals tend to have less equipment and specialised staff. The facilities and number of specialised staff available in a hospital like Whipps Cross University Hospital were significantly less.**

**Furthermore, the Interventional Radiology (IR) department was significantly larger than many other hospitals and had three functioning and fully equipment IR theatres. At a smaller hospital like Whipps Cross, there is only one IR theatre, and the distinction between IR and clinical radiology was more subtle.**

**There has been an increased reliance on imaging for diagnosis; this has resulted in greater demand for the radiology departments. With the rise in demand for imaging, the UK has a deficiency within its imaging services. In 2006, 97% of UK radiology departments were unable to meet their reporting target(3). The number of radiologist per population is considerably lower than many European countries(4). This means that there are not enough qualified radiologists to deal with this high**

demand. This deficiency in radiologist puts strains on radiology departments and increases waiting times for imaging. This also constitutes a problem for the availability of radiologists for emergency imaging and their availability to participate in multidisciplinary meetings(5).

Furthermore, the UK also faces a shortage of Interventional Radiologists. Interventional radiology (IR) procedures can be lifesaving especially in patients with bleeding complications as results of trauma or GI complications(4). Hence, a lack of IR consultants is another challenge that compromises patient health and safety.

Solving this crisis requires time and resources. Some potential solutions may include increasing the number of training posts, but this is a long-term strategy. Other options can include facilitating for radiologists who wish to take a part-time post, utilizing retired radiologists, allowing radiologists to work from home and making use of teleradiology sources(5). With this increased demand for imaging and deficiency in radiologist, it has been estimated that over 40% of NHS radiology departments are now relying on teleradiology to reduce the pressure(5).

My 6 week elective in radiology at Great Ormond Street Hospital (GOSH), and a previous five-week student selected component in radiology at Whipps Cross University Hospital has provided me with an excellent insight into the everyday work of a radiologist. This eleven week experience in radiology has allowed me to observe the many aspects of the work of both clinical and interventional radiologists. This was also a great opportunity to engage with radiologists at different levels of their training and clear some of the misconceptions I had about radiology. In a tertiary centre like GOSH, there was a clear distinction between the roles of clinical and interventional radiologists. The interventional team had a more hands-on approach, spending most of their time in the IR theatres treating patients using minimal invasive interventional procedures. On the other hand, the clinical radiologists' involvement in the diagnosis and management of the patient was through reporting different imaging modalities, facilitating MDT meetings and performing diagnostic procedures like fluoroscopy and ultrasound. During my time at Whipps Cross, I found that there wasn't as much of a clear distinction between the IR and clinical radiology team. Most clinical radiologists I shadowed were able to perform some IR procedures (such as drains and biopsies).

One of my misconceptions was that radiologists have no patient contact, unlike other physicians. In fact, I have noticed that radiologists have a significant amount of patient contact through procedures like fluoroscopy lists, portable ultrasound and ultrasound lists. Though, physicians tend to have patient contact and continuity of care as they encounter patients during clinics and ward rounds. However, this is not necessarily the case for IR, where there is a more hands-on approach.

## References

1. Hospital GOS. Who we are: GreatOrmondSt; 2018 [Available from: <https://www.gosh.nhs.uk/about-us/who-we-are> [Accessed on 18/05/2018].
2. Hospital GOS. Vein of Galen malformation: GreatOrmondSt; 2018 [Available from: <https://www.gosh.nhs.uk/conditions-and-treatments/conditions-we-treat/vein-galen-malformation> [Accessed on 18/05/2018].
3. Rimmer A. Radiologist shortage leaves patient care at risk, warns royal college. *Bmj*. 2017;359:j4683.

4. RCR. The Royal College of Radiologists outlines the challenge facing the Secretary of State for Health in improving imaging and cancer treatment services | The Royal College of Radiologists 2018 [Available from: <https://www.rcr.ac.uk/posts/royal-college-radiologists-outlines-challenge-facing-secretary-state-health-improving-imaging> [Accessed on 19/05/2018].
5. RCR. Sustainable future for diagnostic radiology 2018 [Available from: <https://www.rcr.ac.uk/clinical-radiology/service-delivery/sustainable-future-diagnostic-radiology> [Accessed on 20/05/2018].