

ELECTIVE (SSC5a) REPORT (1200 words)

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

I organised my electives at Westmead's Children Hospital under the Department of Cardiology, which took place for 3 weeks. During my time I was based mostly on the wards and attended weekly conference meetings, long ward stay meetings, Cath labs, EP sessions and clinics. I attended rounds with the Cardiology and Cardiothoracic team at NICU and PICU, then ward round with the Cardiology team. I also shadowed congenital heart disease clinics regularly seeing patients ranging from a few months old to 18-year-olds. I also observed procedures like electrophysiology studies and catheter procedures and had a much better understanding of the mechanism to these procedures.

Objective 1 : Gain understanding of common paediatric cardiology conditions and management strategies, and how they differ from the UK.

There is a huge range of patients on the wards, but the most common conditions are patent ductus arteriosus (PDA), ventricular septal defect (VSD) and atrial septal defect (ASD), in which they are admitted for repair. Others include transposition of great arteries, requiring switching, and co-arcuation of aorta, requiring stenting. As most of these heart defects can be picked up on antenatal scans, these babies are commonly born locally at Westmead's Hospital and then transferred as soon as possible to the Cardiology department for surgery or other procedures. Occasionally surgeons would prefer to delay surgery to a later date, this can be due to various reasons ranging from the complexity of the surgery to the growth of the patient. In order for the patient to have the best surgical outcome and recovery, sometimes it is best to wait for the patient to grow slightly bigger, especially premature infants, and then undergo surgery. In some more complex cases, surgeries are also done in severe parts, for example, the reconstruction surgery for many types of single ventricle heart defects, which is usually done in three parts – the Norwood procedure, Glenn operation then finally the Fontan procedure. In these cases, there needs to be a decision of when to do the surgery and how it should be done. For these more complex cases, an MDT approach is used in which there is a week joint meeting between the cardiology department and the cardiothoracic surgery department, to discuss acute patients on the wards, outpatients requiring surgery and surgeries done in the past week. This ensures their management is agreed amongst all physicians, which is important as there is often no single correct approach to many of the patients' presentations. Therefore, a consensus amongst the experienced physicians will be the best decision for the patient.

At the same time, as Westmead Children's Hospital is one of the largest paediatric hospitals in the southern hemisphere, there are more services provided compared to the paediatric departments I have been to in the UK for placements. There are congenital heart disease clinics running every day and this is a one stop clinic, involving not just a follow-up appointment with the cardiologist, but also a holistic investigation, including echo, ECG, and sometimes exercise ECG is done in the same sitting as well. Therefore, when patients are seen by the cardiologist later during their appointment, different perspectives of heart development, heart health and disease progression can be commented which is very helpful for both patients and physicians. Many surgeries are also done daily, as well as less invasive procedures like catheters for different cardiac abnormalities and electrophysiology studies for arrhythmias. All patients are treated with utmost care, with commonly a few days of ICU admission then

recovery in the wards.

Objective 2 : Understand how to communicate and interact with paediatric patients and their family

A large proportion of patients seen on the wards are very young and have not developed the ability to speak yet, they will not be able to verbalize their needs and wants, which makes care for them difficult. Therefore, parents are very useful as they know their children best, pointing out what is off normal for the child and usually are quite reliable. If parents are not around, doctors will have to rely on changes in their facial expressions or cry as a way of communication and act based on that. This can be used to monitor pain, hunger and other parameters. Thankfully, parents can always be by their side compared to the usual visiting times, thus their input is often considered and valued. In clinics, on the contrary, most patients seen are slightly older and are being followed up on their heart conditions after having surgery when they were infants. These patients will be able to give their updates to the doctor directly, including their ear-specific problems, general health, school performance, exercise tolerance and other useful information. They will also be able to voice their concerns, commonly cosmetic issues with surgical scars, implantable devices and questions about upcoming surgeries if needed. By observing doctors' interaction with patient and parents, I have learned a lot more about how to strike a balance, how not to ignore the child when usually the parents are the main ones voicing out concerns and making decisions and how shared decisions between physicians, parents and child are made.

Objective 3 : Understand how the covid pandemic has led to lasting changes in clinical practice especially in wards and clinics

The COVID pandemic was over 2 years ago but still left some changes in clinical practice. For example, all patients on admission must do a COVID test and isolation precautions are arranged later. Their isolation status is also clearly marked outside all doors, be it contact, droplet or airborne precaution, and placed in single rooms, although negative pressure is rarely used. Hand hygiene was strictly observed, with spray bottles at the end of every bed, outside the bay and connected to portable computers. As this elective is during May and June, which is approaching Winter in the southern hemisphere, there are more flu, bronchiolitis and upper respiratory virus cases, while covid cases in fact remains quite rare.

Objective 4 : Understand how working as a paediatric cardiologist is like and learn more about the nature of working in Australia

The range of work a paediatric cardiologist engages in is vast, as they often have different special interests within paediatric cardiology. Residents and registrars I have spoken to are mostly ward based and are responsible for taking care of in-patients, closely monitoring their clinical progression and adjusting as required. Fellows and consultants alike have a wider variety of work, including attending ward rounds, clinics and procedures. In terms of training, it is an additional three years of advanced training on top of six years of paediatric training. Most doctors do a few years of general paediatrics work then a fellowship, building their CV further. There are a range of sub-specialty areas, including cardiac catheterization and intervention, cardiac genetics, electrophysiology, fetal cardiology, heart failure, imaging and intensive care.

As the Australian public healthcare system takes its form from the NHS, most of its system is very similar to that of the UK. I can see a lot of similarities in day-to-day medical practices, ward round structures and clinic rundown, even the electronic patient record system is the same. Throughout these 3 weeks, I had a much better understanding of what it is like working in the Australian medical system and by speaking to colleagues, I was able to establish a brief timeline of the training pathway for future reference.