ELECTIVE (SSC5b) REPORT (1200 words)

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

The Children's Hospital Westmead forms a part of the Sydney Children's Hospital's Network, acting as a specialist centre in a hub and spoke model with hospitals across Sydney and New South Wales. Therefore, the paediatric surgery department where I have undertaken my elective sees patients with common paediatric surgical conditions in otherwise well patients, whilst also having the capability to manage much rarer conditions or common conditions in children with complex backgrounds. During my time in the department this has varied from appendectomies and orchidopexies to congenital diaphragmatic hernia repairs and a hepatoportoenterostomy (Kasai procedure) for biliary atresia. The disease burden of the patients I have met has been the full spectrum of paediatric surgical pathologies we encountered in our undergraduate curriculum and more. From the literature, it appears the disease burden is similar to east London and the tertiary paediatric surgery departments in the UK. Given both are located within large population centres and operate within well managed and developed systems, this is unsurprising.

The nature of the service provided is similar to surgical departments I have experienced in the UK, but with some particular differences. Parts of the junior doctors (or equivalent) rota would be incompatible to the junior doctors contract in the UK. Whilst in the UK there is a mandatory 48 hours break after a stretch of night shifts, that is not the case in this rota with only 24 hours required. Furthermore, the hours the juniors seem to be working are longer than I have experienced in the UK. However, perhaps the trade off for this is that juniors appear to have much more time in theatre than their British colleagues. Much more of the lists and rounding appear to be registrar/fellow lead, under supervision from the consultant body, as opposed to my experience of surgical firms in the UK being more consultant lead. For example, consultants do not seem to round with the rest of their team in most cases, nor are they often at handover. In contrast with my experiences in the UK where handover and ward rounds are consultant lead.

I have not encountered many patients, if any, from Aboriginal backgrounds. Perhaps this is unsurprising given Aboriginal and Torres Strait Islander people make up just 3.4% of the population of New South Wales (NSW Government, 2024). From the literature, it is apparent that whilst non-Aboriginal Austrlians have comparable or better healthcare outcomes when compared with other, similar, high income countries, this is not shared by Aboriginal peoples, who are more likely to experience numerous chronic diseases, including cardiovascular disease, diabetes mellitus and cancer. This is expressed in a difference in life expectancy, with Aboriginal Australians having a 10 year shorter life expectancy than non-Aboriginal Australians. The reasons for these are complex and likely stretch beyond just healthcare and reflect wider societal issues. Some reasons posited directly to healthcare include the complexity and lack of coordination of services, trust in the healthcare provider, and the distance to healthcare services (Nonan-Isles, et al. 2021).

A 2023 systematic review looked specifically at disparities in surgical delivery and outcomes in indigenous children, including papers from the USA, Canada, Australia and New Zealand. They found only 8 papers from Australia which matched their criteria and none of these 8 papers reviewed general surgical topics. Three reviewed cardiac malformation outcomes and/or follow up, one looked at incidence of microcephaly, and four used data relating to hearing pre and post intervention (Ingram, et al. 2023). The review article goes on to conclude a variety of healthcare outcome measures *(lower follow up rates, higher one year mortality, higher longer term mortality)* have been shown to be worse in Aboriginal patients compared with non-Aboriginal patients in paediatric cardiac surgery in Australia. These differences are not reported in the four otolaryngological studies included in the review article where follow up rates and rates of clinical resolution were high. However, a significantly longer waiting time for elective ENT procedures was described, with wait times averaging 11 months in a rural service for Indigenous children compared with 65 days for similar surgeries in a major, urban centre (Ingram, et al. 2023).

Ingram et al. 2023 conclude that, globally, Aboriginal/Indigenous and/or Native American paediatric patients are likely to face delays in management of surgical conditions when compared with people not from these communities. Whilst this is perhaps not surprising, what I did find surprising is how little data this review found on general surgical topics in Aboriginal Australian patients. Given the documented difference in cardiac and ENT services in Australia, it is probable there is some difference in how Aboriginal patients, their families and communities experience and access paediatric general surgical services. However, this 2023 systematic review found no published data on this from Australia that they were able to include in their study. Therefore, that suggests that without that data, it is difficult to provide a comment on the experiences of this population further, and that further work is needed in this area.

In my time with the department, I have been exposed to more paediatric surgical conditions and procedures than I had ever expected. I have met patients and seen operations that cover almost all of the surgical pathologies that I recall from my undergraduate child health modules. Looking at the postgraduate paediatric surgery curriculum for higher specialty training in the UK, it is striking how many of these conditions I have seen during this placement.

Something else that I have developed that I don't think I had expected to or had before, was a realisation of how unwell some of these children are and formulating my own emotional response to those events. This was particularly true for me in the case of a child who had a congenital diaphragmatic hernia repaired. When I started this placement on the Monday, he was the first case I saw in theatre, at two days of life, having been born on the Saturday. He was already on ECMO and sedated. Since then, he has returned to theatre numerous times and continues to have an open abdomen and be on ECMO. During my first week, I realised that this baby, in his first few weeks of life, has already been more sick than I or the vast majority of people have ever been. Exposing myself to these very unwell children at this stage of my learning, when I am not under pressure for their management I feel has helped me develop ways of managing the stresses that come with those experiences in a low stress environment. Knowing that all of these interventions are in his best interest, despite how invasive they may seem, definitely helps, as does seeing the way all the teams involved in his management care for him. This development was not one I expected to make, but one I am very glad for and I hope to continue through my foundation practice in the coming years.

Martha-Conley Ingram, Sasha Becker, Sydney L. Olson, Stacy Tsai, Arjun Sarkar, David H. Rothstein, Erik D. Skarsgard, Mehul V Raval, Disparities in surgical health service delivery and outcomes for indigenous children, Journal of Pediatric Surgery, Volume 58, Issue 3, 2023, Pages 375-383, ISSN 0022-3468, https://doi.org/10.1016/j.jpedsurg.2022.09.005. (https://www.sciencedirect.com/science/article/pii/S002234682200567X)

New South Wales Government, Key Facts about NSW, NSW Government Website, 2024, Accessed: 27/05/2024, Available at: https://www.nsw.gov.au/about-nsw/key-facts-about-nsw#:~:text=Aboriginal%20and%20Torres%20Strait%20Islander,Aboriginal%20or%20Torres%20Strait%20Islander.

Nolan-Isles D, Macniven R, Hunter K, Gwynn J, Lincoln M, Moir R, Dimitropoulos Y, Taylor D, Agius T, Finlayson H, Martin R, Ward K, Tobin S, Gwynne K. Enablers and Barriers to Accessing Healthcare Services for Aboriginal People in New South Wales, Australia. Int J Environ Res Public Health. 2021 Mar 15;18(6):3014. doi: 10.3390/ijerph18063014. PMID: 33804104; PMCID: PMC7999419.