

**Children's Hospital of Philadelphia – Craniofacial Unit**

**BAOMS Travel Grant – Alex Rickart - 1st -26th May 2023**

My month-long visit to the Children's Hospital of Philadelphia provided an excellent insight into the processes, decision making, and surgical techniques used at one of the leading craniofacial centres internationally. Although visiting for a relatively short period of time, the high volume allowed me to quickly develop an understanding of the approach of the unit to both syndromic and non-syndromic craniosynostosis as well as several other congenital craniofacial conditions.

Having been established by Dr Linton Whitaker in 1972, the craniofacial unit has a rich history in pioneering the management of children with craniofacial deformity, something which continues under the guidance of the chief of the division, Dr Jesse Taylor. The team here were incredibly welcoming and were all more than willing to share their views and experience with me by discussing cases and talking through different approaches to care.

My previous experience and understanding of craniofacial surgery is based around the team at Great Ormond Street Hospital for Children. As such, it was particularly valuable to discuss

the nuances and differences in how to approach patients with craniofacial anomalies. For example, the watchful waiting often employed for infants with Pierre-Robin Sequence in the UK contrasts with the more active approach of neonatal mandibular distraction osteogenesis utilised more frequently here in Philadelphia. Similarly, novel and minimally invasive approaches to conditions such as unicoronal synostosis using distraction osteogenesis were eye opening and a testament to the progressive and innovative environment created at the Children's Hospital of Philadelphia. The benefit of seeing the different ways of approaching cases holds incredible value for trainees and aspiring craniofacial surgeons like myself.

During my visit I was able to see over ten cranial vault procedures including posterior-vault distraction osteogenesis, total calvarial remodelling and fronto-orbital advancement (including both Marchac and Fearon techniques). Further to this, it was possible to see a handful of minimally invasive approaches to craniosynostosis using springs. Additionally, I was able to see a range of other craniofacial procedures including orthognathic surgery, total ear reconstruction and subcranial Le Fort III osteotomies. My learning in the operating theatre was complimented by attendance at clinics, with particular benefit being found in the multidisciplinary team meetings and Monday morning case-based discussion, where all residents and attendings were present.

The unit has a strong research set-up and ahead of this visit, we had arranged a data-sharing agreement between my home centre and Philadelphia. This focussed on developing ongoing work utilising machine learning to better understand craniofacial morphology and provide objective assessment of craniofacial surgery. During my visit, I was able to pre-process a

good volume of data for later analysis and hope to build on these foundations to develop future clinical and research collaborations.

It was fortunate that the team here was hosting an international craniofacial symposium at the time of my visit. This two day event had a range of excellent speakers who were able to give fascinating insight into their approach to craniofacial surgery. I learnt a great deal from a diverse programme and through discussion of conflicting viewpoints and controversies during the question and answer sessions.

I would like to extend my thanks to the whole team at the Children's Hospital of Philadelphia who gave me so much of their time to support my learning and to truly make me feel like a part of the team. I really would recommend visiting this centre to any aspiring craniofacial surgeon and I cannot speak highly enough of the team and the work they do there.

Finally, I would like to thank BAOMS for supporting my visit and also to acknowledge the EACMFS Hugo Obwegeser Travelling Fellowship for providing additional financial support.