SBNS Elective report

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Neurosurgery Sub-Internship, Johns Hopkins Hospital, US

I had the privilege of completing a four-week neurosurgery sub-internship at Johns Hopkins Hospital, an experience that proved to be both intense and immensely rewarding. This elective has become a cornerstone of my undergraduate study, deepening my knowledge, refining my practical skills, and broadening my perspective on global neurosurgical practice.

During my time at JHU, I rotated through different services within the neurosurgery department, gaining exposure to Oncological, Functional, Skull base, Vascular, Trauma, Spine, and Paediatric Neurosurgery. A typical day would begin at 5AM with pre-rounds alongside junior residents and physician associates, followed by full team rounds with the chief residents. This was followed by morning educational conferences and Neuro ICU handover, before surgeries started. With approximately 15 surgeries occurring daily across multiple theatres, I had the opportunity to observe and assist in a wide range of fascinating and complex procedures. Days often ended between 5 and 9PM, especially when emergency cases arose. I also completed a 24-hour on-call shift with residents, offering insight into the overnight management of referrals and urgent neurosurgical presentations.

The program was notably hands-on. Over the course of the elective, I was actively involved in 40 cases, scrubbing into the majority of them. I practiced fundamental surgical techniques including prepping the Mayfield, cleaning the surgical site, general assisting, instrument handling, drilling burr holes, prepping bone flap, suturing, and knot-tying. The breadth of surgical exposure was

remarkable, from emergency burr holes for subdural haematomas to dorsal rhizotomy in children with cerebral palsy, and from responsive neurostimulation for Parkinson's disease to cranioplasty in neuroplastic reconstruction. This comprehensive exposure significantly strengthened my understanding of neuroanatomy, surgical procedures, and the technical demands of neurosurgery.

In parallel with clinical activities, I engaged in ongoing research with the functional and paediatric neurosurgery teams. I contributed to projects investigating early deep brain stimulation (DBS) in Parkinson's disease, and the impact of simulation training for EVD and ETV procedures. I am excited to continue collaborating with the team on these and future projects.

Working alongside a group of dedicated residents profoundly changed my perspective on professionalism and communication. Observing how they approached high-pressure situations with composure, clarity, and compassion was truly inspiring. Their ability to navigate complex clinical challenges while maintaining respectful and effective communication with both patients, families, and colleagues has set a standard I aspire to emulate as I begin my own medical career.

This elective not only enhanced my clinical and academic skills but also deepened my appreciation for the contrasting models of healthcare in the US and the UK. The experience underscored the importance of adaptability, cultural competence, and systems-awareness in delivering patient-centred care, offering a broadened outlook as I move forward into foundation training in the NHS.

I would like to express my heartfelt appreciation to everyone at the Johns Hopkins Hospital Department of Neurosurgery for their mentorship and support throughout this extraordinary elective. I am also deeply grateful to King's College London for supporting the administrative costs of the elective, and to SBNS for awarding me the elective bursary, without which this invaluable experience would not have been possible.