

Neurosurgery

Why specialise in Neurosurgery?

Neurosurgery (also called Neurological Surgery) is the treatment (both non-operative and operative) of diseases and conditions (congenital and acquired) of the nervous system - the brain, pituitary gland, spinal cord and peripheral nerves, and their coverings. The coverings include the meninges, the skull, the vertebrae and the overlying soft tissues of the scalp, muscle, subcutaneous layers and skin. Patients of all ages with such conditions are treated by neurosurgeons.

Operations on the skull and brain date back for thousands of years, but it was not until the early part of the 20th century that the subspecialty of neurosurgery and specialist neurosurgeons evolved and there has been further evolution with the development of specific subspecialties within neurosurgery. Of all surgical specialties, Neurosurgery deals with the widest range of ages (from in utero and the premature baby to the very elderly, the widest range of pathological conditions, has the largest percentage of benign tumours and the widest range of surgical techniques including the most delicate microsurgery. In addition, the applied functional anatomy and physiology - form and function - especially together with advances in modern neuro-imaging, make it a very intellectually stimulating specialty with great scope for research and one which can offer immense benefits to patients. Neurosurgery can be a very satisfying and rewarding career.

Career prospects

There is a relative shortage of neurosurgeons in Australia and New Zealand and there is also an ageing neurosurgical workforce in both countries and so succession planning is vital. It is important that we attract and train neurosurgeons who wish to practice neurosurgery in New Zealand and in our world class public health system and in conjunction with a private practice if wished.

All about our service

The Department of Neurosurgery is based at Christchurch Hospital and cares for both adult and paediatric patients. Adult neurosurgical patients are cared for in B8, the Neurosciences ward, together with neurological patients. Paediatric cases are cared for in the three paediatric wards, including CHOC (Children's Oncology Cancer Centre). Neurosurgery is very well supported by a full range of other surgical and medical specialties and has ready access to modern imaging (including CT, MRI, U/S, DSA). Christchurch Hospital has a well-established PACS system for accessing all imaging. We also are well supported by and work closely with the Department of Medical Physics and Bioengineering and together produce surgical equipment and implants - specifically custom-built cranial prostheses/plates both for use here and also in other

centres in Australia and New Zealand. In the 2015/2016 year, the service saw 660 new and 1551 follow-up outpatients, had 1273 admissions of which 177 were children and performed 743 operations, of which 2.0% comprised acute cranial trauma and the greater proportion were for conditions such as intracranial aneurysms (both clipping and endovascular coiling), intracranial and spinal tumours, spinal degenerative conditions, spinal disc lesions, treatment of hydrocephalus, neuromodulation neurosurgery for pain and peripheral nerve surgery etc.

There are five Specialist Neurosurgeons, who have subspecialty interests in spinal, vascular and endovascular, paediatric, pituitary, skull base, neuro-oncology and pain. The Service is accredited by The Royal Australasian College of Surgeons and the Neurosurgical Society of Australasia for advanced/vocational/SET neurosurgical training. The service has four registrars; one is an advanced trainee from Australia / New Zealand and another is an advanced trainee from the USA. The remaining two registrar positions are non-training positions and may be filled by registrars considering a career in Neurosurgery. There are currently two house officers, one being shared with the Neurology Department. There is a high level of support and supervision from the consultants for the registrars and by the consultants and registrars for the house officers. There are five full days of elective surgery per week, one Interventional Radiology theatre per week for endovascular cases, with acute cases also being dealt with in another acute theatre as necessary. All Neurosurgeons have at least weekly outpatient clinics.

There are regular daily ward rounds and these always have a combined patient care and teaching focus. We have Neuro-Oncology Multidisciplinary Meetings fortnightly and Neuroscience Clinical Meetings weekly.

Training in our service

We regard training in neurosurgery as an integral part of our day-to-day work, as every patient and their management can provide experiences in care. Appropriately-provided supervision is essential to do achieve this and we provide this. Training is given in all aspects of neurosurgical care: history-taking, neurological examination, imaging modalities and their interpretation, and then both non-operative and operative management, this last obviously involving neurosurgical operations. The unit has a big range of neurosurgical texts and has always been actively involved in the teaching of nurses, undergraduate medical students and house officers and registrars at all levels. We are accredited by The Royal Australasian College of Surgeons and the Neurosurgical Society of Australasia for advanced/vocational/SET neurosurgical training.

The neurosurgical training in Australia and New Zealand (Australasia) is world-class and is undertaken by the Royal Australasian College of Surgeons and the Neurosurgical Society of Australasia. After the fourth post-graduate year, the application can be made

to be on the neurosurgical training program. There is a requirement to have sat and passed a generic surgical exam and a number of courses for acceptance. Set training is spent at any of the accredited hospitals for SET training, these being located in Australia and New Zealand. A basic neurological exam will need to be passed in the first or second year to continue training. For details of training requirements please refer to the Neurosurgical Society of Australasia (www.nsa.org.au). The trainee can spend 2 years at the most in any one training unit, these being the larger units and one year in the smaller units. Whilst this means that the trainee will have to move between units in perhaps two countries, the benefits of a much broader neurosurgical training across several sites far outweigh any perceived travel disruptions. There are several subspecialties within neurosurgery and these are all exciting expanding fields nationally and internationally. An exit exam (RACS part 2) will need to be passed for admission for Fellowship.

Research

The department has been quite active over 30 years in submitting papers for publication and we have had, and continue to have, close associations with clinical and laboratory-based research personnel, both in Christchurch and Dunedin. The Christchurch School of Medicine is part of the Otago Medical School and so there is an association here that is also used. The department has a very comprehensive and accurate database and this has provided and continues to provide material and information for clinical research and audit.

SMO / Kaimahi (staff) support

The Specialist Neurosurgeons, whether on-call or not, provide strong support for RMOs and especially for the neurosurgical registrar on call. This support includes communication by telephone, texting, email, access to PACS images from remote sites and of course in person, for both non-operative and operative management. Operative management includes the registrar assisting with operations, being supervised in operations with the consultant scrubbed or in attendance or with the registrar as operating surgeon and the consultant available by phone or attendance if needed. As stated above, teaching is an integral part of patient care

Advantages to training with the Department of Neurosurgery with Canterbury District Health Board

We have a busy, robust general neurosurgical unit, which covers virtually all neurosurgical conditions and operations. The unit is based in a busy, well-staffed and equipped medium-sized true large tertiary hospital with a full range of other specialties and support services. There is a strong sense of coherence and working together on our campus.

Enquiries

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