The Prince of Wales Spine Fellowship

The Prince of Wales Hospital is a 440 bed tertiary referral hospital in south east Sydney. The Hospital admits 30,000 emergency patients and performs 5,200 elective surgical procedures each year. There is a full and comprehensive range of clinical, imaging and pathology services available at all times. In particular urgent MRI scanning is available 24 hours a day, 7 days a week. There are 20 intensive care and high dependency beds. Prince of Wales Hospital has one of two Spinal Cord Injury Units serving NSW. There are over 30 admissions of acute spinal cord injury each year. Emergency air transfers are brought to a helipad immediately outside the Intensive Care Unit. Acute and rehabilitation spinal cord injury services are both located on the hospital campus. The Departments of Orthopaedics and Neurosurgery contribute equally to provision of acute surgical services for spinal injuries. Elective surgery in spine is carried out every work day. Intraoperative neuromonitoring of the spinal cord is available. There are dedicated elective spine outpatient clinics weekly in orthopaedics and neurosurgery.

The Prince of Wales Hospital has successfully run a spine fellowship program for 6 years which offers advanced skills acquisition for newly qualified surgeons intending to pursue a career in spine surgery (see attached position description). The fellowship provides a full range of clinical, surgical and research experience supported by the co-location of Prince of Wales Hospital and Sydney Children’s Hospital and the Surgical and Orthopaedic Research Laboratory. The tenure of appointment is for 12 months. The chief supervisor is Dr Ralph Stanford who administers the program and is one of the surgical supervisors.

Applications to the Prince of Wales Spine Fellowship program are invited from local (Australian) and overseas trainees who have or will complete specialist training on orthopaedics or neurosurgery prior to starting the fellowship. In Australia that will mean completing FRACS training and for overseas applicants the equivalent certification. The fellowship at Prince of Wales has previously had Australian, English and American fellows.

Supervisors

Dr Ralph Stanford  BMedSci MBBS PhD FRACS FAOrthA
Consultant orthopaedic surgeon, Prince of Wales Hospital and Prince of Wales Private Hospital
Chief supervisor Prince of Wales Spine Fellowship

Dr Andreas Loefler  BSc MBBS FRACS FROrthA
Consultant orthopaedic surgeon, Prince of Wales Hospital and Prince of Wales Private Hospital

Dr Ralph Mobbs  BSc MS MBBS FRACS (Neurosurgery)
Consultant neurosurgeon, Prince of Wales Hospital and Prince of Wales Private Hospital

Dr Raj Reddy  MBBS MS FRACS (Neurosurgery)
Consultant neurosurgeon, Prince of Wales Hospital and Prince of Wales Private Hospital

Dr Angus Gray  MBBS FRACS FOorthA
Consultant orthopaedic surgeon, Sydney Childrens Hospital and Prince of Wales Private Hospital

Prof William Walsh  BA PhD
Director, Surgical and Orthopaedic Research Laboratory, UNSW and Prince of Wales Hospital

30 May 2015
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Accreditation by Australian Orthopaedic Association/Neurosurgical Society of Australia

The Prince of Wales Spine Fellowship has been awarded Post Fellowship Education and Training (PFET) accreditation by the Australian Orthopaedic Association. The AOA and NSA have concluded an agreement to establish combined accreditation for PFET in spine surgery and this has been submitted to the Royal Australasian College of Surgeons for ratification. The Prince of Wales Spine Fellowship will seek accreditation under combined PFET once that has been established.

Other fellowship programs

The department of orthopaedics has three other fellowship positions in lower limb surgery, shoulder and elbow surgery and foot and ankle surgery. Annually three fellows in total are trained in those positions. All fellow positions are externally funded by industry. There are no other fellowship positions in neurosurgery.

Workload of the spinal surgical units

Elective spine surgery annually:
- Adult orthopaedics ............ 150
- Paediatric orthopaedics .... 50
- Neurosurgery ..................... 250

Emergency spine surgery annually:
- Total .................................. 110

Outpatient spine clinics annually:
- Adult orthopaedics............. new patients 190, follow up patients 480
- Neurosurgery ..................... new patients 210, follow up patients 430
- Paediatric orthopaedics .... new patients 190, follow up patients 550

Goals of the Fellowship

To develop independent advanced management skills in spine surgery
- Self-reflection during clinical assessment and formulation of diagnostic possibilities
- Appropriate use of imaging and other investigations
- Full understanding of natural history of clinical syndromes
- Development of detailed management and surgical plan
- Anticipation of obstacles to execution of surgical plan and taking next steps to avoid obstacles
- Mature management of available resources to achieve treatment goals
- Complete explanation to patient and family including expected pathway
- Positive leadership of clinical team and other staff

To develop advanced skills in complex spinal surgery
- State clear surgical plan
- Arrange for all relevant equipment and imaging to be available in operating theatre
- Ensure Team Time Out (confirm patient identity and procedure) and safe positioning of patient
- Positive team leadership in operating theatre and communication with anaesthetist
- Appropriate post-operative care
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- Definitive management of complications

Range of technical skills
- Posterior decompression; open and minimally invasive
- Safe spinal screw placement in all locations from occiput to iliac wings
- Percutaneous pedicle screw placement
- Posterior interbody fusion
- Deformity or fracture correction and rod contouring and placement
- Vertebrectomy and interbody cage placement by posterior approach
- Transthoracic or thoraco-abdominal exposure of spinal column
- Extra-peritoneal exposure of lumbar spine from direct anterior or lateral approaches
- Anterior exposure of cervical spine from C2 to T2
- Anterior discectomy or corpectomy with or without spinal canal decompression
- Anterior or lateral interbody fusion
- Anterior placement of disc arthroplasty

Research and self-directed learning
- Complete a small project or contribute to a project based on clinical outcomes or laboratory investigation
- Participate and conduct second monthly spine journal club
- To balance clinical responsibilities with research imperatives

Resources to achieve goals

Clinical and surgical goals
- Guaranteed access to consultant at all times for discussion of clinical cases
- Weekly participation in meetings where case management is discussed critically and constructively
- Weekly ward round with Dr Stanford
- Weekly attendance at hospital outpatient clinics with consultant supervision and discussion
- Some free time for independent study – hospital library on site plus internet access to College of Surgeons and AOA learning resources
- Will have dedicated desk and computer in hospital
- The fellow will independently assess emergency patients and always have immediate access to the consultant surgeon responsible to confirm diagnosis and management
- Observation and supervision by consultant surgeon in operating theatre with direct transfer of skills
- Graduation to independent operating as observed skills develop
- Participation in journal club and review of articles to promote evidence based practice
- Teaching responsibilities for students and surgical trainees

Research goals
- Co-location of Surgical and Research Laboratory on grounds of Prince of Wales Hospital
- Supervision by and access to Dr Stanford, Dr Mobbs and Prof Walsh
- Time allocated during work week
- Has access to dedicated computer and desk
- Online access to University of New South Wales library
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Evaluation processes
The spine will have a monthly informal meeting with Dr Stanford on a Thursday morning for the purpose of discussing performance or any other issues of concern to the fellow. Dr Stanford will provide feedback to the fellow and make adjustments to training as needed for the fellow. Dr Stanford will liaise with his co-supervisors about any changes necessary. The fellow’s performance will be discussed at a departmental level every two months as part of standing agenda to review the performance of all trainees. Dr Stanford will communicate feedback the fellow following such meetings or take remedial action as required.

The supervisors of the Prince of Wales Spine Fellowship are themselves subject to performance review by their departments at the hospital. The spinal fellow will have the opportunity to discuss any concerns that they may have with a supervisor with Dr Stanford who will counsel the supervisor accordingly. The fellow will have Dr Stanford’s mobile phone number and free access to his office at all times.

Fellowship activities

Meetings and collaboration between orthopaedic and neurosurgery
Previous fellows have benefitted from close collaboration between orthopaedic and neurosurgeons providing full breadth of experience in spine surgery from discectomy to complex paediatric and adult deformity corrections and tumour excision. The second weekly spine meeting is held conjointly with orthopaedics and neurosurgery and all emergency admissions are discussed as well as complex elective cases or those requiring discussion of adverse events.

Research
The Surgical and Orthopaedic Research Laboratory run by Prof Walsh has an active program in basic science research of the spine, covering anatomical, biomechanical and animal studies. Dr Mobbs and Dr Stanford both collaborate with Prof Walsh in conduct of spinal related research, providing ample opportunities for participation in a project. At present Dr Stanford and Prof Walsh are supervising analysis of adjacent level stresses and strains in an animal model with a view to replicating adjacent level fracture in humans. This work will provide ample opportunity for the spine fellow to conduct a basic science project at the laboratory. Dr Mobbs has an active program of research based on clinical data and laboratory investigation.

Prince of Wales Private Hospital – private assisting
The spine fellow will be accredited at Prince of Wales Private Hospital and participate in surgical procedures there as an assistant. This provides the opportunity to experience an additional range of procedures and technologies not available in the public hospital, such as imaged guided spinal surgery. The fellow may attend the private hospital after completed all necessary duties at the public hospital during hours or any time after hours.

Avoiding conflict with Surgical Education and Training (SET)
Prince of Wales Hospital supports 4 orthopaedic SET trainees and one neurosurgical SET trainee. One orthopaedic SET trainee is allocated to the ‘spine team’ of Dr Stanford and Dr Loeffler. There is also one each additional non-accredited orthopaedic trainee in orthopaedics and neurosurgery. The fellow and the SET trainee will both be present in theatre under supervision of a consultant. Initially, the fellow will observe the consultant, scrubbed alongside him whilst the SET trainee assists and is taught basic spinal surgical skills. Advanced surgical manoeuvres in the spine (such as screw placement) are often repeated within a single case and this allows for both the fellow and the trainee to be given...
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experience in these manoeuvres. With increased skills, the fellow will take the role of primary surgeon and be assisted by the trainee. The trainee will be given more straightforward procedures to perform as primary surgeon.

Level of responsibility
The spine fellow will always act under supervision of a consultant. When on-call for spinal emergencies, the fellow will make the initial patient assessment with the SET trainee and formulate a plan of management in discussion with a consultant. All decisions for surgical intervention and admission to operating theatre will be made with a consultant.

Funding
The Department of Orthopaedics at Prince of Wales Hospital has an establishment position for the Spine Fellow and part funding thereof. Addition funds are required to make the position tenable and so external funding is being sought from three industry partners, Stryker, DePuy Synthes and KH NxGen (Aust) via an independent entity such as the AOA Fellowship fund. Industry partners will abide by the Medical Technology Industry Code of Practice.

Timetable

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<thead>
<tr>
<th>Day</th>
<th>Meetings</th>
<th>Rounds</th>
<th>Operating</th>
<th>Clinics</th>
<th>Teaching</th>
<th>Research</th>
<th>Self-directed learning</th>
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<tbody>
<tr>
<td>Monday</td>
<td>Spine meeting AM</td>
<td>Dr Stanford all day</td>
<td>Orthopaedic registrars 45 minutes every second week</td>
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<tr>
<td>Tuesday</td>
<td>Neurosurgery radiology meeting PM</td>
<td>Dr Mobbs all day</td>
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<td>Wednesday</td>
<td>Neurosurgery clinical meeting AM</td>
<td>Dr Loefler / Dr Reddy all day</td>
<td>Scoliosis clinic at SCH in afternoon</td>
<td>Surgical and Orthopaedic Research Lab with Prof Walsh</td>
<td>Study time if not needed in theatre or laboratory</td>
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<tr>
<td>Thursday</td>
<td>Orthopaedic meeting AM</td>
<td>Dr Stanford</td>
<td>Dr Stanford in afternoon</td>
<td>Medical students 1 hour every second week</td>
<td>Free time in mornings</td>
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<tr>
<td>Friday</td>
<td>Dr Gray all day</td>
<td>Neurosurgery in morning</td>
<td>Surgical and Orthopaedic Research Lab with Prof Walsh</td>
<td>Study time if not needed in theatre or laboratory</td>
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Operating theatre
The mix of experience is as follows

- Dr Stanford (orthopaedic surgeon) – complex adult spine
- Dr Mobbs (neurosurgeon) – complex adult spine and minimally invasive spine surgery
- Dr Loefler (orthopaedic surgeon) – complex adult spine
- Dr Reddy (neurosurgeon) – complex adult spine and minimally invasive spine surgery
- Dr Gray (paediatric orthopaedic surgeon) – paediatric spine deformity
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Consultations
• Will take in-hospital and emergency department calls for spinal assessment and then discuss with consultant surgeon on-call

After-hours emergency call
• Will undertake after hours assessment of spinal emergency cases on an agreed roster
• Will attend after hours emergency spine operating on an agreed roster

Journal club
• Spine journal club is scheduled second monthly
• The spine fellow will participate in spine journal club

Prince of Wales Private Hospital
• Operating lists are available for the Fellow to attend as desired:
  o Monday Dr Mobbs
  o Monday/Thursday Dr Gray
  o Wednesday Dr Stanford
  o Friday Dr Loefler
  o Saturday Dr Reddy