

Dr David Vivian

Interventional & Musculoskeletal Physician MBBS FAFMM GDMM MM(Pain Medicine)

Co-Medical Director Metro Pain Group (1986 to present) Monash House, Ground Floor 271 Clayton Rd, Clayton VIC 3168

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Dr David Vivian is a co- director of Metro Pain Group and has over 35 years of experience in pain assessment and the management of complex musculoskeletal problems. He is a past President and a Fellow of the Australasian Faculty of Musculoskeletal Medicine (AFMM) and has specialised not only in the diagnosis and management of complex pain problems, but also in specific pain interventions, including spinal and peripheral nerve stimulation, spinal radiofrequency neurotomy and epidural injection. He has recently authored medical text-book chapters on spinal pain pathophysiology, discography, internal disc disruption, radicular pain, sacroiliac joint assessment and intervention, interventional disc treatment and the role of diagnostic imaging in discogenic pain, and he has subedited a section on Spinal Pain and Intervention in the medical textbook, Pain Procedures in Clinical Practice. He has also written national guidelines for spinal pain and anterior knee pain. As Chairman of the Board of Clinical Intelligence, he is active in innovative data collection and research. Examples of the research efforts in which he is involved in within Metro Pain Clinics includes published articles in Neuromodulation, Pain Medicine and Spine in the last few years, and involvement in various prospective clinical trials.

Dr Vivian has been the director of multidisciplinary musculoskeletal clinics since 1984. These clinics have typically provided patients with advanced treatments and programs in pain management assessment, functional assessment, functional restoration and post-operative rehabilitation. With an annual referral of over 4000 patients to the Metro Pain Clinics, Dr Vivian has performed tens of thousands of diagnostic and treatment procedures. He has also appeared in court as an expert witness on some 200 occasions (but rarely since 2006) and he has been an accredited WorkCover assessor on musculoskeletal matters.

CLINICAL SPECIALTIES

- Interventional pain management
- Chronic back pain
- Specialist diagnosis
- Spinal injection procedures
- Neuromodulation procedures
- Disc and joint injury
- Neuropathic pain
- Imaging

QUALIFICATIONS

- Bachelor of Medicine and Surgery (MBBS)
 University of Melbourne, 1976
- Graduate Diploma Musculoskeletal Medicine (GDMM) Flinders University, 1994
- Fellowship Australasian Faculty Musculoskeletal Medicine, 1999 (FAFMM)
- Master of Medicine (Pain Management)
 Sydney University, 1999

ADDITIONAL POST-GRADUATE EDUCATION

- Diploma in Orthopaedic Medicine, London, 1980
- Course in physical medicine at the Coppleston Postgraduate Medical Institute, Sydney University, 1981
- Completed requirements for the Licentiate in Musculoskeletal Medicine of the Australian Association of Musculoskeletal Medicine, 1981
- Accredited as a Master of Spinal Needle Techniques, by objective examination, under the auspices of the International Spinal Injection Society (ISIS), 1998.
- Over many years, Dr Vivian has attended numerous cadaver courses in needle-based interventions as well as the combined use of anatomical dissection with placement of needles under fluoroscopic vision.

PROFESSIONAL MEMBERSHIPS

- Spinal Intervention Society (SIS)
- International Association for the Study of Pain (IASP)
- Australian Pain Society (APS)
- Australian Association of Musculoskeletal Medicine (AAMM)
- International Neuromodulation Society (INS)
- Australian Faculty of Musculoskeletal Medicine (AFMM), 1995-present

ELECTED AND DELEGATED POSITIONS

- Committee, Australian Association of Musculoskeletal Medicine, 1983-1995
- Secretary, Australian Association of Musculoskeletal Medicine, 1985-1988
- President, Australian Association of Musculoskeletal Medicine, 1988-1991
- Vice-President, Australian Association of Musculoskeletal Medicine, 1991-1993
- Treasurer, Australasian Faculty of Musculoskeletal Medicine, 1997-2003.
- Vice-President, Australian Faculty of Musculoskeletal Medicine, 2003-2005
- President, Australasian Faculty of Musculoskeletal Medicine, 2005-2007
- Education committee, Australasian Faculty of Musculoskeletal Medicine, 2017-
- SIS Research Committee 2011-2017

CURRENT APPOINTMENTS

- Interventional Musculoskeletal Physician & Co-Medical Director Metro Pain Group, Caulfield South, Victoria
- Visiting Pain Management Proceduralist Monash House Private Hospital
- Pain Medicine Journal reviewer

PAST APPOINTMENTS

- Australasian Accreditation Committee for Injection Therapies Australasian Faculty of Musculoskeletal Medicine
- President Australasian Faculty of Musculoskeletal Medicine
- President Australian Association of Musculoskeletal Medicine
- Tutor, Graduate Diploma in Pain Medicine Sydney University, NSW
- Consultant Barbara Walker Centre for Pain Management

CURRENT RESEARCH PROJECTS

- A Multi-Center, Prospective Clinical Trial of Spinal Cord Stimulation with Varying Parameters for the Treatment of Chronic Back and/or Leg Pain
- Spinal Cord Stimulation in the treatment of Chronic, Intractable Pain using the Nalu Neurostimulator System
- A prospective, crossover study evaluating the programmability of Closed-Loop Spinal Cord Stimulation (CL-SCS) for the treatment of chronic upper-limb/neck pain
- Medicinal cannabis for the treatment of chronic pain: an observational study
- Duty Cycling: Prospective study assessing preference of chronic back+/- leg pain patients of stimulation programs
- Upper Limb/Neck: Assess safety and efficacy of HF10 for patients with chronic neck and upper limb
- Pelvic Pain: Assess safety and efficacy of HF10 for patients with chronic pelvic pain
- Peripheral Nerve Field Stimulation for intractable chronic pain.
- Dorsal Root Ganglion SCS -prospective trial: Comparing efficacy of patients utilizing

sub and supra threshold stimulation for chronic pain in lower limbs

- Dorsal Root Ganglion SCS- retrospective trial: Comparing efficacy of patients utilizing sub and supra threshold stimulation for chronic pain in lower limbs
- Mechanism of Action: To collect basic electrophysiological and qualitative data for HF stimulation
- CREATE-1, CRPS: To assess the effect of AX-02 vs placebo on mean pain intensity in CRPS patients.
- A Randomized, Double-Blind, Placebo-Controlled Phase 2A Trial of TNF (alpha inhibitor) Administered by the Transforaminal Epidural Route for the Treatment of Lumbosacral Radiculopathy.
- Peripheral Nerve Field Stimulation for intractable chronic pain.
- Spinal Cord Stimulation for intractable chronic pain.
- A single site observational study on the efficacy of Nevro spinal cord stimulator (SCS) following unsuccessful conventional neuromodulation therapy.
- Precision Spectra™ Neurostimulator System for the Treatment of Chronic Intractable Pain of the Trunk and/or Limbs.
- A Prospective, Open-Label, Pilot Study to Assess the Effect of Spinal Cord Stimulation on Quality of Sleep and Activity Levels in Patients with Chronic Low Back with or without Leg Pain.
- SP Stim: Whisper 2013 An investigation of the therapeutic effect of electrical impulses with short pulse width on pain relief and quality of the spinal cord stimulation in patients with intractable back and/or leg pain.
- A prospective, randomized, controlled study of subcutaneous nerve stimulation for back pain due to Failed Back Surgery Syndrome.
- Prospective Case Series of High Frequency (HF10) Spinal Cord Stimulation in the Treatment of Post Surgical Patients with Complex Back Pain.
- Multicenter Prospective Feasibility Clinical Trial of the Senza Spinal Cord Stimulator system in the Treatment of Chronic Upper Extremity Pain with or without Neck Pain.
- Intrasdisc autologous expanded mesenchymal stem cell clinical audit trial on 10 patients with single level disc degeneration associated with Modic changes or high intensity zone.

CLINICAL STUDY PARTICIPATION

- Precision Injection of the Shoulder Joint in Clinical Practice, 1998-2005
- Accuracy of Epidural Injections A Self-Audit and Practice-Audit, 2003 2008
- Incidence of Intra-Vascular Injection in Medial Branch Blocks and Epidural Infiltration, 2003 - 2008

LECTURES

- Australian Pain Society (ASM) 2013, Topical Session (invited presenter on Panel) -Quirky Clinical Conundra, Canberra, March 2013
- Pitfalls in Interventional Management, Pain Conference, Brisbane, October 2011
- Australasian Faculty Musculoskeletal Medicine Conference. Delegate and Invited Speaker - The Diagnosis of Hip Origin Pain. Auckland, 2009
- INS ANS meetings Melbourne 2006, Adelaide 2007, Perth 2008 (invited speaker); Interventional Spinal Techniques and Pain Management
- Plenary speaker at numerous Annual Scientific Meetings of the Australian Association Musculoskeletal Medicine, 1982-2013
- Invited speaker at the College of Sports Medicine Annual Scientific Meetings,
- Speaker at the satellite meeting for the IASP meeting in Perth, 1990

PRESENTATIONS

Dr Vivian has given numerous presentations as requested by the RACGP, Divisions of General Practice (now Primary Health Networks), Physiotherapy bodies and other allied health bodies over the years. Lectures given include:

- North American Spine Society (NASS) 2017
 - Restorative Neurostimulation For Refractory Chronic Low Back Pain: 2 Year Results From The Reactiv8-A Clinical Trial
 - International Neuromodulation Society (INS) 2017 - A New Functional Treatment For Refractory Chronic Low Back Pain-Best abstract

1 Year Reactiv8-A Trial Results

North American Neuromodulation Society 2017

Poster - Dorsal Root Ganglion stimulation as a treatment for intractable post-surgical groin pain

NSANZ 2016

- HF10 SCS reduces Opioid use in FBSS cohort
- Single trial of burst vs SCS of the DRG vs ULN HF10 Therapy Stimulation: A case study
- ULN HF10 Case Study
- Salvaging Neuromodulation patients with HF10 SCS
- Knee Arthrodesis

North American Neuromodulation Society 2015

Podiums and

- Knee Arthrodesis

posters

- Single trial of burst vs SCS of the DRG vs ULN HF10 $\,$

Therapy Stimulation: A case study

- HF10 SCS reduces Opioid use in FBSS cohort
- ULN HF10 Case Study
- Targeting the Cause, not just the Symptoms:
- A new Treatment for Chronic Low Back Pain -

Results of the ReActiv8-A Trial

GP 2015: The current conservative management of spinal pain

International Neuromodulation Society 12th World Congress 2015

Presentations and posters

- High Frequency Spinal Cord Stimulation at 10 kHz9HF10SCS) for the Treatment of Post-Surgery Back Pain Patients
- Single Centre Experience Prospective Observational study of outcomes: Compensation versus privately Insured patients implanted with Traditional SCS, HF10 SCS or Peripheral Nerve Field Stimulation over 5years
- Salvaging failed Neuromodulation implants with High Frequency Spinal Cord Stimulation at 10,000 Hz
- Peripheral Nerve Stimulation Plenary Panel Discussion (Debate)
- Is Parasthesia Free Stimulation the Future of Spinal Cord

Stimulation?

Posters - An Australian Multicentre Case Series in Chronic Post-surgical Pain

(CPSP) Treated with Dorsal Root Ganglion Stimulation (DRG)
- Dorsal Root Ganglion Stimulation for Neuropathic Dysaesthesia in Lyme Disease-A Case Report

Spine Society of Australia 26th Annual Scientific Meeting 2015

Presentation

- High Frequency Spinal Cord Stimulation at 10kHz for the Treatment of Post-Surgery Back Pain

Neuromodulation Society of Australia & New Zealand 10th Annual Scientific Meeting 2015

Presentation

- Failed Back Surgery Syndrome

Posters

- High Frequency Spinal Cord Stimulation at 10 kHz9HF10SCS)

for the Treatment of Post-Surgery Back Pain Patients

- Salvaging Failed Neuromodulation Implants with High Frequency Spinal Cord Stimulation at 10,000Hz

Adelaide Hernia Conference 2015

Presentation - Neurostimulation of the Dorsal Root Ganglion in the Treatment of Post-Herniorrhaphy Pain

International Spine Intervention Society (ISIS) 22nd Annual General Meeting 2014

Presentation - Does Access to Workers' Compensation Influence

Neuromodulation Therapy Outcomes?"

Posters - Salvaging Failed Neuromodulation Implants with Nevro High

Frequency Spinal Cord Stimulator System

- High Frequency Spinal Cord Stimulation at 10 kHz for the Treatment

of Chronic Pain: 12 Month Real-World Effectiveness

- Radiofrequency Neurotomy for Thoracic Pain
- Neuromodulation for Chronic Pain Conditions 200 Consecutive Cases
- SIS Conference
- Salvaging failed neuromodulation implants with Nevro HR spinal cord simulation

- Ethics, patient protection and the IRB process

- INS meeting Montreal
- RACGP trainees
 - Management of Back Problems In General Practice Latest Evidence
- Physiotherapy Masters programme
 - Interventional Medical Management of Back Pain
- Physiotherapy Pain Group: Medical Management of Back Pain
- Divisions of General Practice
 - Acute Pain Management In General Practice
 - Physical Medicine in the Management of Chronic Pain
 - Physical Medicine in the Management of Acute Pain
 - Merck, Sharp & Dohme series:

The Role of Musculoskeletal Medicine in Acute Pain Management

Dr Vivian has written teaching guidelines for the RACGP. Since 1981, he has regularly, at least on an annual basis, conducted lectures for the Family Medicine Training Programme, and the Royal Australian College of General Practitioners. Topics include: The Management of Spinal Pain Problems (cervical, thoracic and lumbar), and Management of Shoulder Disorders.

Dr Vivian also regularly lectures to students in General Practice Training, Post-Graduate Physiotherapy training courses, Nursing Groups, and has in the past lectured to undergraduate Health Sciences students. He has conducted many pre- and post-conference courses over the last 35 years.

PEER TEACHING

- Metro Pain Group Cadaver Workshop, University of Technology Sydney, February 2018
- Radiofrequency Spinal Treatments. Cadaver Workshop Faculty for the LifeCare Group, Sydney. 4th February 2017.
- Complex Chronic Low Back Pain. Workshop for Allied Health Practitioners, RACV City Club, Melbourne. 9th May 2015.
- Complex Chronic Low Back Pain. Workshop for General Practitioners, The Royce Hotel, Melbourne. 25th October 2014.
- Interventional Pain Management. GPCME Education Workshop, Ballarat.
 4th March 2014
- Discogenic Pain: What Works. Keynote lecture AAMM/AFMM Conference, Leura, NSW. October. 2013
- Cadaver Workshop Facilitator. Advanced Spinal Interventional Procedures, Macquarie University, Sydney. May 2013
- Invited Panelist. Dorsa Vi Product Launch. MCG, Melbourne. March 2013
- Latest Concepts and Techniques in Interventional Pain Management.
 GP and Allied Health Education Meeting. MEHCV Boronia, Melbourne. 2012, 2013.
- Back Pain. GPCME Education Workshop. Bairnsdale. October 2010.
- Chief Instructor in Advanced Spinal Interventional Procedures.
 Cadaver Workshop Monash University. May 2005.
- Chief Instructor in Advanced Spinal Interventional Procedures. Cadaver Workshop. Monash University. May 2004.
- Instructor for fluoroscopic and CT guided spinal injections. Transforaminal Injections and medial branch blocks. Cadaver Workshop for Australasian Radiologists. Cabrini Hospital. March 2003.
- Instructional Course. The International Society for the Study of the Lumbar Spine. Christchurch, New Zealand. 1996.

PUBLICATIONS

Deckers K, De Smedt K, Mitchell B, **Vivian D**, et al. New Therapy for Refractory Chronic Mechanical Low Back Pain-Restorative Neurostimulation to Activate the Lumbar Multifidus: One Year Results of a Prospective Multicenter Clinical Trial. *Neuromodulation.*. 2018 Jan;21(1):48-55.

Mitchell B, Bates D, Verrills P, **Vivian D**, Barnard A. Biological cell therapies for discogenic low back pain. Journal of Science and Medicine in Sport. 2017;20:e43.

Mitchell B, Verrills P, **Vivian D**, DuToit N, Barnard A, Sinclair C. Peripheral Nerve Field Stimulation Therapy for Patients With Thoracic Pain: A Prospective Study. Neuromodulation. 2016;19(7):752-759.

Mitchell B, MacPhail T, **Vivian D**, Verrills P, Barnard A. Diagnostic Sacroiliac Joint Injections:

Is a Control Block Necessary? . Surgical Science. 2015;6:273-281.

Mitchell B, MacPhail T, Vivian D, Verrills P, Barnard A. Radiofrequency Neurotomy for Sacroiliac Joint Pain: A Prospective Study. Surgical Science. 2015;6:265-272.

Verrills P, Rose R, Mitchell B, Vivian D, Barnard A. Peripheral nerve field stimulation for chronic headache: 60 cases and long-term follow-up. Neuromodulation. 2014;17(1):54-59.

Vivian D, Bogduk N. Fibromyalgia. In: Gebhart GF, Schmidt RF, eds. Encyclopedia of Pain. 2nd ed. Berlin: Springer Berlin Heidelberg; 2013.

Vivian D. Central Pain, Diagnosis. In: Gebhart GF, Schmidt RF, eds. Encyclopedia of Pain. 2nd ed. Berlin: Springer Berlin Heidelberg; 2013.

Vivian D. Reliability. In: Gebhart GF, Schmidt RF, eds. Encyclopedia of Pain. 2nd ed. Berlin: Springer Berlin Heidelberg; 2013.

Vivian D. Validity. In: Gebhart GF, Schmidt RF, eds. Encyclopedia of Pain. 2nd ed. Berlin: Springer Berlin Heidelberg; 2013.

Vivian D. Reflections: Understanding whiplash. The Medical Journal of Australia. 2012:196(2):143.

Mitchell B, Verrills P, Vivian D. Sacroiliac joint pain: Diagnosis and treatment. Australasian Musculoskeletal Medicine. 2012;17(1):15-24.

Vivian D, Verrills P. Pathophysiology of Painful Cervical Spine Disorders. In: De Palma MJ, ed. iSpine: Evidence-Based Interventional Spine Care. New York, NY: Demos Medical Publishing LLC; 2011.

Vivian D. Discography. In: Lennard TA, Vivian D, Wakowski SA, Singla KA, eds. Pain Procedures in Clinical Practice. 3rd ed: Elsevier; 2011.

Vivian D. Discogenic Pain, Internal Disc Disruption and Radicular Pain. In: Lennard TA, Vivian D, Wakowski SA, Singla KA, eds. Pain Procedures in Clinical Practice. 3rd ed: Elsevier; 2011.

Vivian D. Intradiscal and Peridiscal Therapies for Discogenic and Radicular Pain. In: Lennard TA, Vivian D, Wakowski SA, Singla KA, eds. Pain Procedures in Clinical Practice. 3rd ed: Elsevier; 2011.

Verrills P, Vivian D, Mitchell B, Barnard A. Peripheral Nerve Field Stimulation for Chronic Pain: 100 Cases and Review of the Literature. Pain Medicine. 2011;12(9):1395-1405.

Verrills P, Bogduk N, Vivian D. Diagnostic Imaging of Lumbosacral Spine Disorders. In: De Palma MJ, ed. iSpine: Evidence-Based Interventional Spine Care. New York, NY: Demos Medical Publishing LLC; 2011.

Verrills P, Bogduk N, Vivian D. Lumbosacral Internal Disc Disruption Syndrome: Role of Diagnostic Imaging. In: DePalma MJ, ed. iSpine: Evidence-Based Interventional Spine Care. New York, NY: Demos Medical; 2011.

Mitchell B, Vivian D. Sacroiliac Joint Pain: Procedures for Diagnosis and Treatment. In: Lennard TA, Vivian D, Wakowski SA, Singla KA, eds. Pain Procedures in Clinical Practice. 3rd ed: Elsevier; 2011.

Lennard TA, Vivian DG, Walkowski SA, Singla AK. Pain Procedures in Clinical Practice. Canada: Elsevier: 2011.

Mitchell B, Verrills P, Vivian D, Sinclair C, Barnard A. Radiofrequency neurotomy for sacroilliac joint pain—Prospective study. Journal of Science and Medicine in Sport. 2010;12:e6-e7.

Mitchell B, McPhail T, Vivian D, Verrills P, Barnard A. Diagnostic sacroiliac joint injections: Is a control block necessary? Journal of Science and Medicine in Sport. 2010;12(Supplement 2):Pages e5-e6.

Vivian D, Barnard A. Prevalence and correlates of three types of pelvic pain in a nationally representative sample of Australian women. Med J Aust. 2009;190(1):47-48; author reply 48.

Verrills P, Mitchell B, Vivian D, Sinclair C. Peripheral Nerve Field Stimulation: Is Age an Indicator of Outcome? Neuromodulation, 2009:12(1):60-67.

Verrills P, Mitchell B, Vivian D, Sinclair C. Peripheral Nerve Stimulation: A Treatment for Chronic Low Back Pain and Failed Back Surgery Syndrome? Neuromodulation. 2009;12(1):68-75.

Verrills P, Mitchell B, Vivian D, Nowesenitz G, Lovell B, Sinclair C. The incidence of intravascular penetration in medial branch blocks: cervical, thoracic, and lumbar spines. Spine (Phila Pa 1976). 2008;33(6):E174-177.

Vivian D. Cervical Epidural Injection (white paper). 2005.

Vivian D. Reliability (white paper). 2005.

Vivian D. Validity (white paper). 2005.

Vivian D. Neurogenic Pain (white paper). 2005.

Vivian D. Fibromyalgia (white paper). 2005.

LowBackPain: A Comprehensive Resource for General Practitioners and their Patients [CD-Rom]: Clinica Media Pty Ltd; 2005.

Vivian D, (co-author) AAMPGG. Evidence-based Management of Acute Musculoskeletal Pain: A Guide for Clinicians. Bowen Hills, QLD: Australian Academy Press Pty Ltd; 2004.

Verrills P, Vivian D. Interventions in chronic low back pain. Aust Fam Physician. 2004;33(6):421-426.

Vivian D, (co-author), Practitioners RCoG, Executive N. The Back Book. 2nd Edition ed: Stationery Office Books (TSO); 2002.

Vivian D. Recommendations for lightning protection in sport. Med J Aust. 2002;177(8):463-464; author reply 464.

Vivian D. The Use of MRI. AAMM Bulletin. 1994.

Vivian D. Osteoporosis. AAMM Bulletin. 1993.

Kornberg C, Vivian D, Wajswelner H. Common Lower Back Problems in Sport - Their Assessment, Management and Prevention. Canberra: Australian Sports Medicine Federation; 1991.

Vivian D. Epidural Injections. AAMM Bulletin. 1990.

Vivian D. The Slump Test. AAMM Bulletin. 1988.

Vivian D. Shoulder Pain. AAMM Bulletin. 1985.

Vivian D. The Cervical Spine: Traction. AAMM Bulletin. 1985.

Vivian D. The Cervical Spine: Function and Dysfunction of Zygapophyseal Joint Pain By Radiofreguency Denervation. AAMM Bulletin. 1985.

Vivian D. Management of Zygapophyseal Joint Pain By Radiofrequency Denervation. AAMM Bulletin. 1985.

PROFESSIONAL DEVELOPMENT

- International Neuromodulation Society annual conference meeting Edinburgh, 2017
- Annual Scientific Meeting of the Australian Association of Musculoskeletal Medicine (AFMM), Adelaide, 2017
- Accreditation course: Evidence based medicine (EBM): Part II. Assessing studies of diagnostic tests and strategies. 2015 & 2016
- Neuromodulation Society of Australia & New Zealand 10th Annual Scientific Meeting, 15th March 2015, Brisbane, Australia
- Stem Cell Update, Las Vegas USA, 5-6 June 2014
- Neuromodulation Society of Australia & New Zealand 9th Annual Scientific Meeting, 13 April 2014 - Hobart, Australia
- Cadaver Workshop, Macquarie University, Accreditation for Spinal Modulation Neuromodulation Techniques, Sydney, 13th/14th March, 2014
- Peer Teaching-Spinal Intervention including Radiofrequency and Epidural Procedures, Perth, 12th February 2014
- Cadaver Workshop, Macquarie University, Cadaver workshop "Accreditation for the use of Mainstay Stimulator "Macquarie University, Sydney, January 31st 2014
- International Spine Intervention Society 17th Annual Meeting, Toronto (Canada), July 2009
- Personalised Teaching in Clinical Setting & Operating Room on Spinal Cord Stimulators & Peripheral Nerve Stimulators by Dr Claudio
- Mr Julian Feller (Neurosurgeon) Memphis, Tennessee, US March 2009. Personal cadaver course and neuromodulation lead insertion technical sessions.
- Australasian Faculty Musculoskeletal Medicine Retreat and Advanced Cadaver Workshop on Lumbar Radiofrequency Techniques. Professor N Bogduk. Newcastle, November 2005
- Advanced Training in Spinal Interventional Procedures, AFMM Course, Newcastle, Australia 2002

- Getz (Australia) Training Course in Spinal Endoscopy and Spinal Cord Stimulation, Melbourne, August 2001
- Depuy/Acromed Course in Disc Puncture and Spine Catheter Intradiscal Electrothermal Annuloplasty, Perth, July 2000
- Australasian Faculty Musculoskeletal Medicine Fellowship training and intensive residential retreats, Newcastle 1999-2000.
- Advanced Training in Manual Medicine,
 Royal Australian College of General Practitioners, Sydney, 1996

CLINICAL AND MEDICAL EXPERIENCE

1979 - 1980

•	2016 - present	Medical Director Monash House Private Hospital
•	2012 - present	Chairman of Board of Clinical Intelligence
•	1986 - present	Director Metro Pain Group
	'	(formerly Metro Spinal Clinic and Metro Pain Clinics)
•	2001	Faculty, Master of Medicine, Pain Management, University of Newcastle
•	1999 - 2002	Consultant, Barbara Walker Centre for Pain Management, St. Vincent 's Hospital, Melbourne
	1999 - 2001	•
•		Faculty, Master of Medicine, Pain Management, University of Sydney
•	1998 - 2002	Member of Victorian Medical WorkCover Panels in the discipline of Musculoskeletal Medicine
•	1997 - 2004	Director, Metropolitan Spinal Rehabilitation Program
•	1997 - 2002	Musculoskeletal Medical Officer, for the National Musculoskeletal
		Health Initiative
•	1987 - 2004	Co-director, Brighton Pain Management Program
•	1982 - 2005	Senior Partner, Brighton Spinal & Sports Medicine Clinic
•	1981 - present	Musculoskeletal medicine referral practice

Orthopaedic Medicine, in London