



ML Experts Consulting

Professor Neeraj Saxena

MBBS, MD, MSc (Pain Management), FRCA, FFPMRCA

Consultant in Anaesthesia & Pain Management,
Cwm Taf University Health Board
(Royal Glamorgan and Prince Charles hospitals)

Clinical Lead,
Inpatient Pain management,
Cwm Taf University Health Board

Other current key roles

Clinical Senior Lecturer, Neurosciences, Cardiff University
NISCHR Clinical research fellow
Council Member, Welsh Pain Society
Secretary, South Wales' Network of Acute Pain teams (SwNAP)

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Profile

Currently as a consultant in anaesthesia and pain medicine my practice ranges from anaesthetising for a wide range of surgical cases with regular sessions in ENT and Orthopaedics. Out of hours, I provide consultant cover for obstetric anaesthesia too.

GMC details

No. 6062060
Full licence to practice

NHS practice sites	Royal Glamorgan Hospital, Llantrisant, CF72 8XR
	Prince Charles Hospital, Merthyr Tydfil, CF47 9DT
Medicolegal and Private clinics	Spire Cardiff Hospital Glamorgan House, Croescadarn Road, Cardiff, South Glamorgan, CF23 8XL
	Nuffield Vale Hospital The Vale Hospital, Hensol Castle Park, Hensol, Vale of Glamorgan, CF72 8JX
	Bridgend Clinic Coity Road, Bridgend, Mid Glamorgan, CF31 1RQ,

QUALIFICATIONS

2012	FFPMRCA
2011	MSc (Pain Management)
2010	CCT (Anaesthesia) ; Royal College of Anaesthetists
2006	FRCA ; Royal College of Anaesthetists (London)
2003	MD; (Anaesthetics, Intensive Care & Pain Medicine); Delhi University, India
1999	MBBS ; Delhi University, India

CAREER SUMMARY

May' 16- current	Professor (Visiting), University of South Wales
Apr' 14- current	NISCHR Clinical Research Fellowship
Dec' 13- current	Clinical Senior Lecturer, Neurosciences, Cardiff University
June' 12- current	Consultant, Cwm Taf UHB, Llanstrisant (Locum Jun'12- Dec' 12)
June '10 –	Clinical Lecturer and Locum Consultant ; Cardiff University and Cardiff

- June' 12 and Vale University Health Board (University Hospital of Wales – (UHW), Cardiff);
- 2005- 2010 **Specialist training-** Anaesthetics- South Wales' rotation
Including
Advanced pain training
- 2003- 2005 **SHO training** – Anaesthetics
University Hospitals of Leicester
North Cheshire hospitals, Warrington
- 2003 **Senior Registrar** – Neuroanaesthesia & Critical Care
Institute of Human Behaviour & Allied Sciences (IHBAS), Delhi, INDIA
University College of Medical Sciences (UCMS), Delhi. India
- 1999- 2002 **PG trainee (SHO/ SpR level)** – Anaesthetics, Intensive Care & Pain
Medicine ;
UCMS, Delhi, India
- 1999 **Senior House Officer** – Burns & Plastic Surgery; UCMS, Delhi, India
- 1998 **House Officer** ; UCMS, Delhi, India.

CLINICAL EXPERIENCE

As a practising pain expert, Professor Saxena manages patients with acute, sub-acute and chronic pain. He is the clinical lead for inpatient pain management at Cwm Taf and is involved in service delivery and service development. His clinical expertise lies in diagnosing painful conditions, prognosticating its course and planning its interdisciplinary management. He manages all painful conditions, although the bulk of his work revolves around patients with musculoskeletal conditions (esp. low back pain/ spinal pain), post- traumatic pain, post-surgical pain, neuropathic pain (including complex regional pain syndrome) and fibromyalgia. Professor Saxena offers a wide range of interventional procedures, medication treatments and can advise on alternative therapies too. He believes in a patient centred approach and works closely with other specialists, of all disciplines, to provide his patients the best possible outcome.

He has also led the development of a South Wales' Network of Acute Pain teams (SwNAP) to raise the standards of inpatient pain management all across South Wales.

Professor Saxena is keenly involved in Pain management training and is the supervisor of junior doctors training in pain medicine. He has also been a board member of the Faculty of Pain Medicine of UK for 2 Years where he contributed to the development of national training standards.

He is now available to provide medicolegal services. He has completed the Bond Solon, Expert Witness report writing course (2015).

MEMBERSHIPS

- British Medical Association
- British Pain Society
- International Association on the study of Pain
- Welsh Pain Society
- Indian Society of Anaesthesiologists
- Medical Protection Society

Awards and Publications

Professor Saxena has been actively involved in research throughout his career. His research interests are varied and range from basic sciences to clinical research. His current research interests are in understanding pain perception (using advanced neuroimaging techniques) and improving clinical outcomes of various pain therapies. He has published and presented his work extensively (some are listed below) and won numerous awards and grants. His research work is supported by funding from the National Institute of Academic Anaesthesia, Welsh Pain Society, National Institute of Health and Social Care Research and the pharmaceutical industry.

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|-------------|--------------------------------|--|
| 2013 | First prize (co-author) | <u>Oral presentation</u> , 'N Saxena, S Muthukumaraswamy, A Diukova, AR Wilkes, KD Singh, RG Wise, JE Hall. Alterations of stimulus-induced gamma oscillatory activity during propofol sedation' at The Society of Anaesthetists of Wales; Spring meeting, Brecon. |
| 2009 | Second prize | <u>Oral presentation</u> , 'The opioid effects on neurovascular coupling in the human brain investigated using EEG and MRI' at The Society of Anaesthetists of Wales; Spring meeting, Brecon. |
| 2008 | First prize | <u>Poster presentation</u> , 'Effectiveness of an Outpatient multidisciplinary pain management programme- Gwent experience' at the annual Welsh Pain Society meeting-2008. |
| 2008 | Third prize | <u>Poster presentation</u> , 'Chronic low back pain; What doctors' think!' at the annual Welsh Pain Society meeting-2008. |
| 2008 | Second prize | <u>Oral presentation</u> , 'Chronic low back pain; What doctors' think!' at the Maelor Pain management prize competition. |
| 2007 | First prize | <u>Poster presentation</u> 'Drug efficacy and patient satisfaction survey of chronic pain patients on Buprenorphine patch.' at the |

annual Welsh Pain Society meeting.

2013 First prize (co-author) Oral presentation, 'N Saxena, S Muthukumaraswamy, A Diukova, AR Wilkes, KD Singh, RG Wise, JE Hall. Alterations of stimulus-induced gamma oscillatory activity during propofol sedation' at The Society of Anaesthetists of Wales; Spring meeting, Brecon.

1. Muthukumaraswamy SD, Shaw AD, Jackson LE, Hall J, Moran R, **Saxena N**. Evidence that Subanesthetic Doses of Ketamine Cause Sustained Disruptions of NMDA and AMPA-Mediated Frontoparietal Connectivity in Humans. *J Neurosci* 2015; 35(33): 11694-706.
2. Shaw AD, **Saxena N**, L EJ, Hall JE, Singh KD, Muthukumaraswamy SD. Ketamine amplifies induced gamma frequency oscillations in the human cerebral cortex. *Eur Neuropsychopharmacol* 2015; 25(8): 1136-46.
3. EA Warnert, K Murphy, **N Saxena**, N Tailor, NS Jenkins, JE Hall, RG Wise. In vivo assessment of human brainstem cerebrovascular function: a multi-inversion time pulsed arterial spin labelling study. *J Cereb Blood Flow Metab* 2014; 34: 956-963.
4. T Gili , **N Saxena**, A Diukova, K Murphy, JE Hall, RG Wise. The thalamus and brainstem act as key hubs in alterations of human brain network connectivity induced by mild propofol sedation. *J Neurosci* 2013; 33: 4024-31.
5. **N Saxena**, SD Muthukumaraswamy, A Diukova , K Singh, J Hall, R Wise. Enhanced Stimulus-Induced Gamma Activity in Humans during Propofol-Induced Sedation. *PLoS One* 2013; 8: e57685.
6. AD Harris, V Robertson, D Huckle, **N Saxena**, C Evans, K Murphy, J Hall, D Bailey, G Mitsis, R Edden, R Wise. Temporal dynamics of lactate concentration in the human brain during acute inspiratory hypoxia.. *J Magn Reson Imaging* 2013; 37 (3): 739-45.
7. AD Harris, K Murphy, CM Diaz, **N Saxena**, J Hall, TT Liu, R Wise. Cerebral blood flow response to acute hypoxic hypoxia. *NMR Biomed* 2013; 26: 1844- 1852.
8. **N Saxena**. Airway management plan in patients with difficult airways having regional anesthesia. *Journal of Anaesthesiology Clinical Pharmacology* 2013; 29: 558- 560.
9. **N Saxena**, S Kadambande, S Khot. From presentation to journal publication: the journey of our Society's ASM abstracts. *Pain news* 2012: 10(1) 49-52.
10. A Khurana, A Guha, **N Saxena**, S Pugh, S Ahuja. Comparison of aprotinin and tranexamic acid in adult scoliosis correction surgery. *Eur Spine J* 2012: 21: 1121-6.

11. RAE Edden, A Harris, K Murphy, J Evans, **N Saxena**, J Hall, D Bailey, R Wise. Edited MRS is sensitive to changes in lactate concentration during inspiratory hypoxia. *J Magn Reson Imaging* 2010; 32: 320-5.
12. **N Saxena**, AJ Parry-Jones. Traumatic haemorrhage into an occult pheochromocytoma: presentation and management in a patient with septic shock. *Anaesthesia* 2008; 63: 428-32.
13. **N Saxena**, I Greenway, LJ Harding, NG Davies. A complication of the 'atraumatic inserter' of the Tracoe expert percutaneous dilation tracheostomy set. *Anaesthesia* 2008; 63: 1377-9.
14. M Kumar, **N Saxena**, AK Saxena. The effect of a colloid or crystalloid preload on hypotension caused by induction of anaesthesia with propofol and fentanyl. *Journal of Anaesthesiology Clinical Pharmacology* 2008; 24: 409-12.
15. **N Saxena**, M Sharma. Cerebral infarction following carotid arterial injection of adrenaline. *Can J Anaesth* 2005; 52: 119.
16. **N Saxena**, S Chaudhary. Open indirect cardiac massage in neonate. *Indian J Pediatr* 2005; 72: 253-5.
17. **N Saxena**, S Ahuja. Laryngeal mask cuff damage during interscalene block. *Anaesthesia* 2003; 58: 600.
18. AK Saxena, **N Saxena**, B Aggarwal, AK Sethi. An unusual complication of sinus arrest following right-sided stellate ganglion block: a case report. *Pain Pract* 2004; 4: 245-8.
19. Richmond L, Jackson L, Shaw A, Hall J, **Saxena N**, Muthukumaraswamy S. The neural, oscillatory, correlates of sedative ketamine infusion: a pharmacological-MEG (magnetoencephalographic) study. *European Journal of Anaesthesiology* 2015; 32(e-Supplement 53): 183.
20. J Clark, A Short, M Chawathe, J Francis, **N Saxena**, D Bogod, V Girotra. Development of a realistic epidural simulator - a translational research project. *Anaesthesia* 2014; 69 (Supp 4): 17
21. S Muthukumaraswamy, LE Jackson, **N Saxena**, A Shaw, RG Wise, JE Hall. Investigating glutamatergic neuro-transmission in the human brain using ketamine sedation. *BJA* 2014; 113: 328- 9 P.
22. **N Saxena**, S Muthukumaraswamy, A Diukova, AR Wilkes, KD Singh, RG Wise, JE Hall. Alterations of stimulus-induced gamma oscillatory activity during propofol sedation. *BJA* 2013; 110: 870-1 P
23. **N Saxena**, M Kumar, N Tailor, T Wilkes and I Hodzovic. Comparing performance of three non-rebreathing Oxygen masks - Topout, Intersurgical™ and Flexicare™. A

- randomised, cross-over volunteer study. BJA 2012 ; 109(4): 665-6P
24. **M Kumar, N Saxena**, T Wilkes, I Hodzovic. Evaluation of three non-rebreathing Oxygen delivery masks. BJA 2012 ; 109(4): 660P
25. **N Saxena**, S Jeffs, O Hughes. Do Pain Management Programmes lead to permanent changes? Long-term effectiveness of an outpatient interdisciplinary PMP: an observational study. World Congress on Pain proceedings, 2012
26. **N Saxena**, S Kadambande, S Khot. From presentation to journal publication: the journey of British Pain Society- Annual scientific meeting abstracts. British Journal of Pain 2012; 6(2)- 96.
27. **N Saxena**, A Diukova, M Venzi, T Gili, D Huckle, S Bell, RG Wise, JE Hall. Endogenous brain oscillations during sedation: Initial results of a MEG and FMRI study. BJA 2012; 108: 721P
28. **N Saxena**, E Lewis; Anaesthetic interventions for vaginal twin deliveries; role of epidural analgesia. IJOA, 2010; S42
29. T Gili, **N Saxena**, A Diukova, K Murphy, J Hall, R Wise. Physiological noise correction may help to detect changes in brain activity during mild sedation. (OHBM proceedings 2012)
30. T Gili, **N Saxena**, A Diukova, K Murphy, J Hall, R Wise. Mild sedation alters eigenvector centrality of BOLD FMRI in the thalamus and brainstem(OHBM proceedings 2012)
31. T Gili, **N Saxena**, A Diukova, K Murphy, J Hall, R Wise. Mapping alterations in cortical and subcortical functional connectivity induced by light sedation. (OHBM proceedings 2012)
32. T Gili, **N Saxena**, A Diukova, K Murphy, J Hall, R Wise. Mapping alterations in cortical and subcortical functional connectivity induced by light sedation. (ISMRM proceedings 2012)
33. AD Harris, K Murphy, C Diaz, **N Saxena**, J Hall, TT Liu, RG Wise. Cerebral blood flow response to hypoxia.(ISMRM proceedings 2012)
34. T Gili, **N Saxena**, A Diukova, K Murphy, J Hall, R Wise. Mild sedation alters eigenvector centrality of BOLD FMRI in the thalamus and brainstem. (OHBM proceedings 2012)
35. AD Harris, RAE Edden, K Murphy, CJ Evans, CY Poon, **N Saxena**, J Hall, TT Liu, DM Bailey, RG Wise. Hemodynamic and metabolic response to hypoxia. ISMRM annual meeting proceedings 2010.
36. S Wartan, **N Saxena**, T Ivanova- Stoilova. The challenge of female pelvic pain- The first Welsh pelvic pain clinic. World Congress on Pain proceedings 2010

- 37.A Diukova, A Jolly, **N Saxena**, K Murphy, CJ Evans, JE Hall, RG Wise. The opioid effects on neurovascular coupling in the human brain investigated using EEG and MRI- Research; British Chapter of the ISMRM conference proceedings, Cardiff, 2009.
- 38.S Khot, A Taylor, **N Saxena**, G Knox. Chronic low back pain: What doctors think? BPS ASM proceedings 2007
- 39.AR Guha, A Khurana, **N Saxena**, S Pugh, A Jones, J Howes, PR Davies, S Ahuja. The effect of blood conservation measures in adult scoliosis correction surgery. JBJS 2008.91-B(S3) -482.
- 40.**N Saxena**, M Kumar, A Kumar. Effect of fluid therapy on haemodynamic changes induced by propofol and fentanyl. Research Society of Anaesthesiology Clinical Pharmacology (RSACP) Conference proceedings, 2002.
- 41.**N Saxena**, M Sharma, KK Mishra, A Kumar. Comparative evaluation of the effect of glycopyrrolate with thiopentone or propofol, for modified ECT on cardiovascular parameters and seizure characteristics. ISA-GOLDCON proceedings-2002.

PRESENTATIONS

Invited talks/ lectures

1. Society of Intravenous anaesthesia – Annual Scientific meeting- **Neurobiology of sedation. What neuroimaging tells us?** 2014
2. Royal College of General Practitioners: South East Wales Faculty. NICE update. **Neuropathic pain management.** 2014
3. Royal College of Anaesthetists – Jubilee Current Concepts Symposium 2013: Rising stars in anaesthesia, pain and critical care, London- **Mechanisms of sedation and anaesthesia: What does neuroimaging tell us?**
4. Anaesthesia Post fellowship study day, Cardiff, 2013- **Anaesthesia and consciousness: Insights from neuroimaging.**
5. Do pain management programmes **lead to permanent changes?** MSc Alumni annual meeting, Cardiff, 2012

International/ National

1. **Endogenous brain oscillations during sedation: Initial results of a MEG and fMRI study.**
Research, oral: Anaesthetic research society, London, 2011

SAW meeting, Brecon, March 2012

2. **Unplanned admissions after day surgery-**
Audit poster; GAT Scientific Committee meeting, Portsmouth, 2004
3. **Testing of neuraxial blocks prior to Caesarean Sections**
Audit poster; The Society of Anaesthetists of Wales; Spring meeting, Brecon, 2006
Oral-presentation; South Wales obstetric Anaesthetists' Forum, Bridgend, 2006
4. **Effect of fluid therapy on haemodynamic changes induced by propofol and fentanyl**
Research paper, oral presentation; Research Society of Anaesthesiology Clinical Pharmacology (RSACP) Conference, Bhopal, India, 2002
5. **Comparative evaluation of the effect of glycopyrrolate with thiopentone or propofol, for modified ECT on cardiovascular parameters and seizure characteristics.**
Research paper, oral presentation; ISA-GOLDCON (National annual conference), Coimbatore, India, 2002
6. **Satisfaction survey of chronic pain patients on Pregabalin**
Audit poster; Welsh Pain Society meeting, Annual Scientific meeting, Llandudno, 2007
7. **Drug efficacy and patient satisfaction survey of chronic pain patients on Buprenorphine patch-**
Audit poster; Welsh Pain Society meeting, Annual Scientific meeting, Llandudno, 2007
8. **Traumatic haemorrhage into an occult pheochromocytoma in a critically ill patient; diagnosis and management**
Case report poster; The Society of Anaesthetists of Wales; Spring meeting, Brecon, 2008
9. **Use of homologous blood products in adult scoliosis correction surgery**
Research poster; The Society of Anaesthetists of Wales; Spring meeting, Brecon, 2008
10. **Chronic low back pain; What doctors think!**
Survey Poster; British Pain Society, Annual Scientific meeting, Liverpool, 2007.
Oral presentation; North Wales Pain study day, Wrexham, 2008.
Poster; Welsh Pain Society meeting- 2007.
11. **Role of early epidural for labour analgesia**
Audit poster; Obstetric anaesthetists' association- ASM, Belfast, 2008.
12. **Effectiveness of an Outpatient multidisciplinary pain management programme- Gwent experience.**

Audit poster; Welsh Pain Society Meeting, 2008.

13. The opioid effects on neurovascular coupling in the human brain investigated using EEG and MRI.

Research paper, Oral presentation at the Society of Anaesthetists of Wales; Spring meeting, Brecon, 2009 (won the second prize). Poster, British Chapter of the ISMRM conference, Cardiff, 2009.

14. Management of a patient with severe coronary artery disease, abdominal aortic aneurysm and a phaeochromocytoma.

Case report, Oral presentation; Society of Anaesthetists of Wales; Spring meeting, Brecon, 2009.

15. Haemodynamic and Metabolic response to hypoxia

Research poster; Presented (by co-author) at ISMRM conference, Stockholm, 2010

16. Anaesthetic interventions for vaginal twin deliveries; role of epidural analgesia

Audit Poster; Presented at Obstetric anaesthetists' association- ASM, Newcastle, 2010.

Local

17. Unplanned admissions after day surgery

Audit, oral presentation, Warrington Hospital, 2004.

18. Comparison of the use of LMA versus ETT for total abdominal hysterectomies.

Audit, oral presentation, Warrington Hospital, 2004.

19. Audit of glove wearing as a part of universal precautions

Audit, oral presentation, Pilgrim Hospital, Boston, 2005

20. Practice of chest auscultation following tracheal intubation

Audit, oral presentation, Pilgrim Hospital, Boston, 2005

21. Visual experiences of patients undergoing cataract surgery

Audit, oral presentation, Royal Glamorgan Hospital, 2006.

22. Testing of neuraxial blocks prior to caesarean section

Audit, oral presentation Royal Glamorgan Hospital, 2006.

23. Resuscitation guidelines' awareness survey

Audit, oral presentation, University Hospital of Wales, 2007.

24. Postoperative airway swelling requiring an emergency tracheostomy

Case report, oral presentation, University Hospital of Wales, 2007

25. Chronobiology and anaesthesia.

Review of literature, oral presentation; Royal Gwent Hospital, 2007.

26.Tracheostomies in ICU patients at RGH

Audit, oral presentation; Royal Gwent Hospital, 2008.