

CURRICULUM VITAE

Dr Michael S Norell MD FRCP LLM

2018

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Date of birth: 30th August 1954

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Pre-University Education Stationers' Company School
London N8

Medical School: University College Hospital Medical School
Gower Street
London WC1

Qualifications: M.B., BS. (London) July 1978
M.R.C.P (London) July 1980
M.D. (London) May 1990
FRCP 1997
LLM Medical Law and Ethics; De Montfort University, May 2017

Awards: **British Heart Foundation
Junior Research Fellowship, January 1986**

**Finalist, Young Research Worker Prize
British Cardiac Society, November 1987**

ACCEA National Bronze Award, 2007 - 2017

GMC Registration: Full, 1.8.79 (No. 2442499)

MDU: 135616E

PRESENT APPOINTMENT

From January 2003 - Consultant Cardiologist
Clinical Director, Cardiothoracic Services
The Heart and Lung Centre
New Cross Hospital
Wolverhampton
UK

Hon. Senior Clinical Lecturer in Cardiology, University of
Birmingham

PREVIOUS APPOINTMENT

From April 1992 - Consultant Cardiologist,
Castle Hill Hospital, Cottingham, East Yorkshire,
Hull Royal Infirmary, Anlaby Road,
Hull, UK

Hon. Senior Clinical Lecturer in Cardiology, University of Hull

CLINICAL APPOINTMENTS FOLLOWING QUALIFICATION

Aug 1978 – Jan 1979	Pre-reg H.S. in Orthopaedics & Vascular Surgery Edgware General Hospital, Middlesex
Feb 1979 – Aug 1979	Pre-reg HP in Gen Med & Cardiology Whittington Hospital, London
Sept 1979 – May 1981	SHO in General Medicine Northampton General Hospital
June 1981 – Aug 1983	Registrar in General Medicine & Cardiology Hillingdon Hospital, Uxbridge, Middlesex
Sept 1983 – Dec 1985	Registrar in Cardiology London Chest Hospital, London E2
Jan 1986 – April 1988	British Heart Foundation Junior Research Fellow Cardiac Department London Chest Hospital, London E2
May 1988 – March 1992	Cardiology Senior Registrar Rotation Harefield Hospital, Middlesex & Royal Free Hospital, London

MEMBERSHIP OF SOCIETIES & NON-CLINICAL ROLES

British Cardiovascular Intervention Society (BCIS, Council Member 1994-2002, Honorary Secretary 1996-2000)

British Cardiovascular Society, (BCS, Council Member 2002 – 2006)

Assistant County Surgeon, St John Ambulance, County of Humberside, (1996-2000)

Clinical Co-ordinator for Cardiology, Hull & East Yorkshire Hospitals, (1998-2000)

Clinical Lead, Coronary Revascularisation Project, Hull & East Yorkshire Hospitals CHD Collaborative, (2000-2002)

Chair, Angina/Revascularisation Group, Black Country Cardiac Network (20004 – 2008)

West Midlands Deanery Training Committee, Wolverhampton Representative, (Cardiology, 2003 – 2008)

Expert Advisor/Assessor, MHRA (Medicines and Healthcare products Regulatory Agency; formerly MDA, 1998 – date)

Expert Advisor to NCEPOD (“Heart of the Matter” 2008; “Caring to the End” 2009)

Secretary to BCS Working Group on UK Cardiac Service Provision (2005-2008)

Referee/Assessor: National Institute for Health Research; Health Technology Assessment programme (2008)

Lead Cardiologist, Heart and Lung Centre, Wolverhampton (2008-date)

NCAS Cardiology and PCI Assessor: National Patient Safety Agency (2008-date)

Member, BCS Guidelines and Practice Committee (2008-date)

Member, BCIS Professional Standards Group (2009-date)

Cardiology Speciality Advisor, In Health Group (formerly Cardinal Medical 2003 – date)

Senior Coach, Executive Fellowship Programme, Crossroads Institute, Belgium (Abbott Vascular; 2008-date)

Lead for Communications, BCIS (from 2012)

Parliamentary and Health Service Ombudsman, Cardiology Advisor (from 2012)

TEACHING, EDUCATION & TRAINING

Since qualification, I have been involved in the teaching of undergraduates, postgraduates and fellow practitioners as well as all professions allied to Medicine. This has taken the form of bedside teaching, small group tutorials, interactive discussion, live case demonstration and formal lectures. Although my main interest has been in Interventional Cardiology, this teaching has encompassed the whole field of cardiological practice.

I have been an invited speaker at training courses for cardiac **catheter lab staff** in Liverpool (2006, 2007) and for an **interventional trainees** course run by Leeds (2006-2011). I have been an invited lecturer on an annual Cardiac Diagnostics and Interventional Module for **professions allied to medicine** run by the **University of Central England** since 2004, and to the **BHF** annual Nurses' conference in 2009

I have been an invited member of the Faculty for **Advanced Angioplasty** (a national flagship meeting organised by BCIS, now called Advanced Cardiovascular Intervention) for the last 15 years and an invited Faculty member for **Euro PCR** (a major European PCI meeting) for the last 6 years.

I was co-organiser of two national PCI meetings (**PCI "Live"**) in London and Birmingham (2007, 2008), and have been invited onto the Faculty of **Transradial PCI** courses held in Stoke (2004 – 2007) and London (2008), **Transpennine PCI** meetings in Leeds and Manchester (2008-2012), as well as to the Lothian Live Cardiology Study Day in Scotland (2004).

I am regularly invited to lecture at an annual interventional training course (**Basic Cardiovascular Intervention**) held in Bristol, UK and endorsed by BCIS as a nationally recognised course for trainees wishing to explore a career in cardiovascular intervention.

I have been invited to undertake live case PCI demonstrations at courses in **Mombai, Delhi, Dubai and Amman**, and to lecture at the International Conference of the **Jordanian Cardiac Society** in Amman (2006, 2008, 2012). I have been invited to speak at **ESC** meetings in **Stockholm** (ESC, 2005) and Prague (Acute Cardiac Care, 2006). I was also invited to speak at **Anglo-Israeli Cardiovascular Symposia** in Israel in October 2009, London in October 2010 and again in Israel in 2011.

For the last 4 years I have been the UK training Coach for the **Crossroads Institute in Brussels**. This is an internationally recognised facility, supported by Abbott Vascular and based in Belgium, which runs structured PCI training programmes throughout Europe. I organise and run training modules in the UK and also contribute to other Crossroads educational events in Europe. The first of three UK modules was held in November 2008, and the second series of three modules began in 2011.

We have developed strong links with **RADI** and hold regular one-day workshops covering the use of the Pressure Wire. In addition to small group discussions, these also allow "hands-on" sessions. When our centre was built and equipped I was keen to ensure

that fluoroscopic, ECG and haemodynamic data from all 3 GE cath labs could be transmitted into a nearby meeting room as well as to our main seminar room, together with a two-way audio link. This has enabled us to provide high quality teaching and training in all aspects of diagnostic and interventional cath lab procedures.

My links with **St. Jude Medical** have enabled me to organise two courses on **Fundamental Techniques in Cardiac Catheterisation** in 2009 and 2011. This is directed towards trainees in cardiology who are early on their programme of invasive training.

I am **Editor in Chief** of a major international textbook on cardiac intervention (**Essential Interventional Cardiology**). This comprises 40 chapters by internationally renowned authors and covers the whole range of cardiovascular interventional procedures. The second edition was published by Saunders-Elsevier in 2008.

INTERVENTIONAL CARDIOLOGY EXPERIENCE

Having been trained in cardiac intervention at well established centres (The London Chest and Harefield Hospitals) I had a significant experience in coronary intervention before being appointed as a consultant. Building upon this foundation, I have been an independent PCI operator since 1992 when I implanted the first intracoronary stent used in Hull.

I have since undertaken between 200 and 250 procedures annually and have amassed a personal series in excess of **6000** cases. In addition, recognised by BCIS as a PCI trainer, I have tutored trainees and fellows, as well as supervised consultant colleagues undertaking complex cases or in the process of retraining. This further volume of cases, for which I have been clinically responsible, is now in excess of **3000**.

I have experience in the use of a number of adjunctive interventional or diagnostic devices which include **pressure wire and IVUS, directional and rotational atherectomy, thrombus extraction and distal protection, as well as laser technology.**

RESEARCH

MD Thesis (Assessment of left ventricular performance during coronary angioplasty, University of London, 1990)

My MD thesis addressed left ventricular contraction during coronary angioplasty. This model of controlled myocardial ischaemia enabled examination of specific pathophysiological phenomenon, e.g. change in R wave amplitude, the importance of collateralisation, the relevance of reciprocal ECG changes and the time course of recovery following brief periods of balloon coronary occlusion.

My main area of interest has been in coronary artery disease and in particular the management of acute coronary syndromes. Accordingly I have published papers and reviews on the management of Cardiogenic Shock and ventricular septal rupture complicating myocardial infarction as well as one of the first accounts of experience with a Rapid Access Chest Pain Clinic which was set up in 1989.

Research whilst in Hull involved the assessment of interventional strategies in acute coronary syndromes, particularly cardiogenic shock complicating myocardial infarction. As such I instigated a randomised study (HEROICS: How Effective are Revascularisation Options in Cardiogenic Shock?) and supervised a research registrar in this area. I was the lead investigator in Hull's contribution to an international study addressing stenting in multi vessel coronary disease - the Stent or Surgery (SOS) trial - and a multi-centre UK trial examining intervention in the setting of failed thrombolysis (REACT).

I was on the steering group of the HEART UK TRIAL examining the benefits of surgical or percutaneous revascularisation in patients with angina and evidence of impaired left ventricular contraction. Hull is the co-ordinating centre of this trial.

Having established the interventional service in Wolverhampton we very quickly began contributing to multi-centre PCI trials or registries (BCIS-1, BBC-ONE, GENESIS, OLYMPIA, PROTECT and XIMA). We are currently exploring novel stent technologies and designs (e.g. GENOUS, BIOMATRIX and a dedicated side-branch stent, TRYTON).

More recently I have developed an interest in the process by which cardiac care is delivered across the UK. I was a member of a BCS Working Group on UK cardiac service provision, which has published reports for the last 3 years, and I was invited to produce an editorial for HEART as well as a review on the subject for the RCP journal, Clinical Medicine.

I am currently Chair of the Data Monitoring Committee for the MR-INFORM trial - an international, multicentre study examining the role of MRI in guiding PCI compared with Pressure Wire evaluation.

I am currently the UK Principle Investigator for the FDA TRYTON IDE trial, the first randomised, international, multicentre study comparing the TRYTON side branch stent with a strategy of provisional stenting in patients with bifurcation disease.

INDUSTRY LINKS & PRODUCT EVALUATION

I have enjoyed a long association with the device industry since my involvement with cardiac intervention began in 1983, and have developed relationships with many companies over the last 25 years.

I have chaired or contributed to Advisory Boards for Boston Scientific, Abbott Vascular, Cordis and Medtronic as well as for the Pharmaceutical Industry with MSD-Schering Plough, Eli Lilly and Sanofi-Aventis. I have run pressure wire workshops for RADI and intra-aortic balloon pump study days for Datascope. I have been Cardiology Advisor to InHealth Group (formerly Cardinal) for the last 5 years.

For the last 10 years I have regularly evaluated new devices or interventional trial protocols submitted to the MHRA. My association with Industry has allowed our unit to assess and evaluate new devices before they are launched into the interventional market; a recent example is the TRYTON “side branch stent”.

PEER REVIEW, MANAGEMENT, LEADERSHIP & MEDICO-LEGAL WORK

My long involvement with BCIS has required me to undertake peer review visits to, and write up reports on, centres which are planning to establish a PCI service.

I was an expert advisor to **NCEPOD** and contributed to their recent report on adverse outcome following first time CABG (“The Heart of the Matter”) published in 2008.

In 2008, I successfully completed a training and selection workshop organised by the **National Patient Safety Agency** and was subsequently appointed as a PCI assessor to the **National Clinical Assessment Service**. This requires intensive analysis of an individual practitioner’s performance, putting it into the wider context of their working environment and producing a substantial, evidenced based report which may be used to assist the practitioner and their Trust.

In 2003 I was appointed as **PCI Programme Director** to establish and lead the PCI service for the new £60m cardiothoracic development in Wolverhampton. This was a major challenge and allowed me to utilise both my interventional experience as well as that derived from being an established consultant cardiologist for the previous 10 years.

Currently we perform 1600 PCI's annually and are the largest such centre in the West Midlands.

In April 2007, the Heart and Lung Centre in Wolverhampton established a round the clock service offering **primary PCI** to patients presenting with AMI in the Black Country, a population of 1.1 million. We treat 500 AMI patients per year using this approach and are currently one of the largest Heart Attack centres in the UK.

I have been the **Lead Cardiologist** at the Heart and Lung Centre in Wolverhampton, since 2008. I have spearheaded a number of developments which have allowed our service to run more efficiently and to improve the patient journey.

A web-based system (Teleologic) now monitors patients admitted to referring hospitals with an acute coronary syndrome and awaiting in hospital transfer to our centre with a view to revascularisation. Using this system we are able to keep IHT delays to a minimum. I introduced a **pooled waiting list** system for both diagnostic angiography and PCI which allows us to work well within the 18 week target.

I chair our twice weekly **MDT** meetings. Attendance and case discussions are documented in order to make the decision process as transparent as possible.

I have also led our department in appointing a cardiac ultrasonographer consultant to direct our echocardiography department, establishing an onsite nuclear cardiology service and a comprehensive electrophysiological programme.

For the last 2 year our centre has been selected by our regional commissioners to develop a Transcatheter Aortic Valve Implantation (**TAVI**) programme and we have now undertaken in excess of 100 cases.

In 2012 I was appointed as a clinical advisor to the **Parliamentary and Health Service Ombudsman (PHSO)**. My work with this body has been to assess complaints made against hospital Trusts and which remain unresolved. These are of a cardiology nature and I am required to review all the documents involved in order to derive an objective assessment of the case and thereby assist the PHSO in reaching a conclusion.

I have been **Clinical Director for Cardiothoracic Services** since January 2014 and have undertaken **medico-legal work** since 2012 usually receiving instructions from Browne Jacobson or Weightmans Solicitors. I regularly undertake RCA and case investigations for my Trust who sponsored me in completing a **Masters in Medical Law and Ethics** through distance learning at De Montfort University, Leicester. I was awarded a LLM (with Merit) in May, 2017

PUBLISHED PAPERS

Since 2005 I have published a 1200 word column on a monthly basis in either the British Journal of Cardiology or Cardiology News. I have chosen not to itemise these in this section.

1. Management of “no-reflow” complicating reperfusion therapy
Lee KW, **Norell MS**.
Acute Cardiac Care. 2008;10(1):5-14.
2. Cardiogenic shock complicating myocardial infarction and outcome following percutaneous coronary intervention
Lee KW, **Norell MS**.
Acute Cardiac Care. 2008;10(3):131-43.
3. Cardiac Service provision in the United Kingdom
M S Norell
Clinical Medicine Vol 7 No 5 October 2007
4. National variations in cardiac service provision in the United Kingdom; 2nd report of the BCS Working Group.
Boon N, **Norell MS** et al
Heart, 2007
5. Primary PCI for AMI in the UK: pipe dream or achievable goal?
Norell M S
Br J Cardiol 2004; 11
6. State of the Heart
Norell M S
pH7 - The Parliamentary Health Magazine 2005; 13: 26-8
7. Repeat thrombolysis for acute myocardial infarction
Banerjee P, Clark A, **Norell M S**
Int J Cardiol 2005; 102(3): 515-9
8. National variations in the provision of cardiac services in the United Kingdom
Brooks N, **Norell M S**, Hall J et al.
Br J Cardiol 2005; 12:192-8
9. National variations in cardiac service provision: how united is our kingdom?
Norell M S, Jennings K
Heart 2006
10. Delivering a modern PCI service: can we change with the times.
Norell M S, Khogali S, Cotton J, Cusack M
Br J Cardiol 2005; 12: AIC 27-30

11. Anti-thrombotic medication during percutaneous coronary intervention.
Norell M S. (Editorial)
Int J Cardiol 2001; 79:126-7.
12. Percutaneous coronary intervention from the radial arterial approach: What is the learning curve?
Norell M S, Hoyer A.
Br J Cardiol 2002; Supplement.
13. Cardiogenic shock complicating acute myocardial infarction: What's new?
Banerjee P, **Norell M S.**
B J Cardiol 2000; 7:543-7.
14. Cardiogenic shock complicating myocardial infarction: What more should we be doing?
Alamgir M F, **Norell M S.**
International Cardiology Monitor 2000; 7:2-5.
15. Inoue balloon rupture during dilatation of calcified mitral valves.
Shilling R, Francis C, Shaw T R, **Norell M S.**
British Heart Journal 1995; 73:390.
16. Coronary artery disease in identical twins.
Shilling R, **Norell M S.**
European Heart Journal 1995; 16:134-5.
17. Transferring patients for primary infarct angioplasty.
Norell M S, Walters M, Lim R. (Editorial)
Heart 1997; 78:325-326.
18. Randomised trials in cardiogenic shock: What's the problem?
Norell M S. (Editorial)
European Heart Journal 1999; 20:987-988.
19. Feasibility, accuracy and safety of magnetic resonance imaging in acute aortic dissection.
Panting J R, **Norell M S,** Baker C, Nicholson A A.
Clinical Radiology 1995; 50:455-458.
20. Initial results and long-term clinical follow up of a silicon carbide coated stent.
Hanekamp C E, Bonnier H J, Michels R H, Peels K H, Heijmen E P, Van Hagen E, Koolen J J, Thomas M R, **Norell M S,** et al.
Progress in biochemical research February 1999; 90-95.
21. Post-infarction cardiogenic shock: Is there an evidence base for new management strategies in the late 1990's?
Walters M, **Norell M S.**
Acute coronary syndromes Vol I No. 2 1998; 52-58.

22. Cardiogenic shock after myocardial infarction: What should we do?
Walters M, **Norell M S**.
Care of the critically ill June 1999 Vol 15 No. 3:105-108.
23. Limited value of the resting ECG in the assessment of patients with recent onset chest pain: lessons from a chest pain clinic.
Norell M S, Lythall D, Coghlan G, Cheng A, Kushwaha S, Swan J, Ilsley C, Mitchell A.
British Heart Journal 1992; 67:53-6.
24. Myocardial echoamplitude changes during reversible ischaemia in humans.
Lythall D A, Gibson D G, Kushwaha S S, **Norell M S**, Mitchell A G, Ilsley C.
British Heart Journal. (reference can be supplied)
25. Oral enximone therapy in patients referred for cardiac transplantation.
Coghlan J, **Norell M S**, Ilsley C, Mitchell A.
International Journal of Cardiology. (reference can be supplied)
26. Detection of free radicals and lipid hydroperoxides in blood taken from the coronary sinus of man during percutaneous transluminal coronary angioplasty.
Coghlan J, Flitter W, Holley A, **Norell M S**, Mitchell A, Ilsley C, Slater.
Free Radical Research. (reference can be supplied)
27. Deterioration in left ventricular performance during early coronary angioplasty after thrombolysis: evidence for myocardial salvage.
Norell M S, Lyons J, Davies S, Timmis A, Balcon R.
The Texas Heart Institute Journal 1991; 18:110-5.
28. Patterns of coronary artery disease in post-infarction ventricular septal rupture.
Skehan J, Carey C, **Norell M S**, de Belder M, Balcon R, Mills P.
British Heart Journal 1989; 62:268-72.
29. Phase and amplitude analysis of exercise digital left ventriculograms in patients with coronary disease
Lyons J, **Norell M S**, Gardener J, Layton C, Balcon R.
British Heart Journal 1989; 62:102-11.
30. Protective effect of collateral vessels during coronary angioplasty.
Norell M S, Lyons J, Gardener J, Layton C, Balcon R.
British Heart Journal 1989; 62:241-5.
31. Significance of "Reciprocal" ST segment depression: observations during LAD coronary angioplasty
Norell M S, Lyons J, Gardener J, Layton C, Balcon R.
J Am Coll Cardiol 1989; 13:1270-4.

32. Assessment of left ventricular performance during coronary angioplasty: an intravenous digital subtraction ventriculographic study.
Norell M S, Lyons J, Gershlick A, Gardener J, Rothman M, Layton C, Balcon R.
British Heart Journal 1988; 59:419-28.
33. The demonstration and exercise-induced myocardial ischaemia using phase and amplitude analysis of exercise digital left ventriculograms.
Lyons J, **Norell M S**, Gardener J, Balcon R, Layton C.
European Heart Journal 1987; 8(supp G):137-41.
34. The current place of PTCA.
Norell M S, Balcon R.
British Journal of Hospital Medicine 1988; 38:216-20.
35. Digital subtraction angiography of the heart.
Norell M S.
Current opinion in Cardiology 1987; 2:1045-50.
36. What happens to the left ventricle during PTCA?
Norell M S.
Lancet 1987; 11:432-3 (Editorial).
37. Ventricular septal rupture complicating myocardial infarction: is earlier surgery justified?
Norell M S, Gershlick A, Pillai R, Walesby R, Magee P, Wright J, Layton C, Balcon R.
European Heart Journal 1987; (8):1281-6.
38. Intravenous digital subtraction angiography in the diagnosis and management of acute aortic dissection.
Lyons J, Gershlick A, **Norell M S**, Reubens M, Magee P, Layton C.
European Heart Journal 1987; 186-9.
39. Untreated heart failure: clinical and neuroendocrine effects of introducing diuretics.
Bayliss J, **Norell M S**, Canepa-Anson R, Sutton G C, Poole-Wilson P.
British Heart Journal 1987; 17-22
40. Vasodilation with Captopril and Prazosin in chronic heart failure: double blind study at rest and on exercise.
Bayliss J, Canepa-Anson R, **Norell M S**, Poole-Wilson p, Sutton G C.
British Heart Journal 1986; 55:265-73.
41. 25 years ago: Cardiovascular therapy in 1961.
Norell M S.
The Practitioner 1986; 230:79-80

42. Outcome of early surgery following coronary angioplasty.
Norell M S, Lyons J, Layton C, Balcon R.
British Heart Journal 1985; 55:223-6.
43. Clinical importance of the renin-angiotensin system in chronic heart failure: double blind comparison of Captopril and Prazosin.
Bayliss J, **Norell M S**, Canepa-Anson R, Reid C, Poole-Wilson P, Sutton G C.
British Heart Journal 1985; 290:1861-5.
44. Utility of provocative tests for coronary artery spasm.
Norell M S, Balcon R.
European Heart Journal 1985; 6(supp F):33-6.
45. Solitary tumour metastasis: a rare cause of right ventricular outflow tract obstruction and sudden death.
Norell M S, Sarvasvaran N R, Sutton G C.
European Heart Journal 1984; 5:684-8.
46. Acute haemodynamic comparison of amrinone and pirbuterol in chronic heart failure.
Additional effects of Isosorbide Dinitrate.
Bayliss J, **Norell M S**, Canepa-Anson R, Reuben S, Poole-Wilson P, Sutton G C.
British Heart Journal 1983; 49:214-21.
47. Bedside haemodynamic monitoring: experience in a general hospital.
Bayliss J, **Norell M S**, Ryan A, Thurston M, Sutton G C.
British Medical Journal 1983; 287:187-90.
48. Two dimensional echocardiographic diagnosis of Cor Triatriatum.
Norell M S, Lincoln C, Sutton G C.
Journal of Cardiovascular Ultrasonography 1983; 2:369-72.
49. Clinical studies with beta-2 adrenoceptor agonists in heart failure.
Dawson J R, Bayliss J, **Norell MS**, Canepa-Anson R, Kuan P, Reuben S, Poole-Wilson P, Sutton G C.
European Heart Journal 1982; 3(suppl);135-41.
50. Six-month and one-year clinical outcomes after placement of a dedicated coronary bifurcation stent: a patient-level pooled analysis of eight registry studies
Grundeken M, Asgedom S, Damman P, Lesiak M, **Norell M** et al
Eurointervention; January 2013

BOOK CHAPTERS

1. Use of intravenous DSA in the assessment of LV performance during PTCA.
Norell M S, Balcon R.
In: PTCA; An investigation tool and non-operative treatment of acute ischaemia.
Eds. Serruys P W, Simon R and Beatt K J.
Kluwer Academic Publications, 1990.
2. Mitral valve disease.
Norell M S.
In: Handbook of current diagnosis and treatment (pages 256 – 9).
Eds. Pounder R and Hamilton M.
Churchill Livingstone Publications, 1995.
3. Coronary Angioplasty: History, Development & Current Activity.
Norell M S.
In: Essential Interventional Cardiology (pages 3-12).
Editors: Norell & Perrins, Publishers, Harcourt Brace, 2001.
4. Guidelines for Good Practice & Training in Coronary Angioplasty, Audit & Device Regulation.
Norell M S.
In: Essential Interventional Cardiology (pages 357-65).
Editors: Norell & Perrins, Publishers, Harcourt Brace, 2001.
5. Coronary angiography for the interventional cardiologist.
Norell M S.
In: Practical Interventional Cardiology (pages 9-15).
Editors: Grech & Ramsdale, Publishers, Martin Dunitz, (2002).
6. Use of the Wall stent in saphenous vein graft intervention.
Norell M S.
In: Illustrated Coronary Intervention, D Ramsdale.
Publishers, Martin Dunitz (2001).
7. Management of Cardiogenic Shock.
K Witte, **Norell M S.**
In: Handbook of Cardiovascular Emergencies (pages 129-138).
Editor: N Curzen, Publishers, Science Press (2001).
8. History, development and current activity in coronary intervention
Norell MS
In: Essential Interventional Cardiology, 2nd Edition (pages 3-12)
Eds: Norell, Perrins, Meier, Lincoff
Saunders-Elsevier, 2008

EDITORIAL ROLES

Co-editor, Interventional Cardiology (HEART Supplement 2, October 1997)
Norell MS, De Belder MA.

Co-editor, Interventional Cardiology (HEART Supplement II, October 1999)
Norell MS, De Belder MA, Perrins JE.

Co-editor, Essential Interventional Cardiology. (2001). Pub W.B. Saunders.
Norell M S, Perrins J.

Editor in Chief, Essential Interventional Cardiology, 2nd Edition (2008)
Pub Saunders-Elsevier
Norell MS, Perrins JE, Meier B, Lincoff MA

Editor in Chief, Cardiology News (2006 –date)

This is a bimonthly periodical produced by Pinpoint Scotland. It publishes trial updates, conference and book reviews, journal scans, interviews with key opinion leaders in Cardiology and review articles. This has a predominately UK readership both in cardiology (practitioners and trainees) as well in primary care, currently amounting to 5000.

I regularly referee papers submitted to the following journals; HEART, European Heart Journal, British Journal of Cardiology, International Journal of Cardiology and American Journal of Cardiology.

PUBLISHED ABSTRACTS & CORRESPONDENCE

1. Urgent GP referral to a cardiac centre: evaluation of a chest pain clinic.
Norell M S, Lythall D, Mitchell A, Ilsley C.
Presented to the British Cardiac Society, May 1990.
2. Demonstration of myocardium at further risk after thrombolysis in acute myocardial infarction.
Norell M S, Lyons J, Davies S, Timmis A, Balcon R.
Presented to the British Cardiac Society, November 1988.
3. Demonstration of myocardial salvage with streptokinase: left ventriculography during angioplasty after thrombolysis.
Norell M S, Lyons J, Timmis A, Balcon R.
Presented to the 10th Congress of the European Society of Cardiology, Vienna, August 1988.
4. The assessment of LV performance during PTCA using intravenous digital subtraction ventriculography.
Norell M S.
Presented in the final of the Young Research Worker's competition, British Cardiac Society, November 1987.
5. Significance of inferior ST depression during LAD PTCA.
Norell M S, Lyons J, Gardener J, Layton C, Balcon R.
Presented to the Annual Symposium of the Texas Heart Institute, Houston, Texas, October 1987.
6. Protective effect of collateral vessels during PTCA.
Norell M S, Lyons J, Gardener J, Layton C, Balcon R.
Presented to the Annual Symposium of the Texas Heart Institute, Houston, Texas, October 1987.
7. Inferior ST segment depression during LAD coronary angioplasty: inferior ischaemia or "reciprocal" change?
Norell M S, Lyons J, Gardener J, Layton C, Balcon R.
Presented to the British Cardiac Society, April 1987.
8. Detection of myocardial ischaemia during coronary angioplasty: limitation of ECG monitoring.
Norell M S, Lyons J, Gardener J, Layton C, Balcon R.
Presented to the British Cardiac Society, November 1986.
9. Ventricular septal defect complicating myocardial infarction, is early surgery justified?
Norell M S, Gershlick A, Pillai R, Magee P, Balcon R.
Presented to the British Heart Society, November 1986.

10. Increase in left ventricular volumes during coronary angioplasty: inverse correlation with R wave amplitude.
Norell M S, Lyons J, Gardener J, Layton C, Balcon R.
Presented to the 16th Annual Symposium of the Texas Heart Institute. International Symposium on Interventional Cardiology, Houston, Texas, September 1986.
11. Investigation of left ventricular contraction during coronary angioplasty: feasibility and results using digital subtraction ventriculography.
Norell M S, Lyons J, Gardener J, Layton C, Balcon R.
Presented to the 16th Annual Symposium of the Texas Heart Institute. International Symposium on Interventional Cardiology, Houston, Texas, September 1986.
12. Outcome of early surgery following coronary angioplasty.
Norell M S, Balcon R.
Presented to the British Cardiac Society, December 1984.
13. Failure of exercise testing to predict outcome following transmural, non-transmural myocardial infarction and unstable angina.
Norell M S, Bayliss J, Samuel C, Sutton G C.
Presented to the British Cardiac Society, November 1983.
14. Lack of prognostic value of exercise induced ST segment changes following transmural myocardial infarction.
Norell M S, Bayliss J, Sutton G C.
Presented to the 3rd Joint Meeting of the working groups of the European Society of Cardiology, Spa, September 1983.
15. Free radical production during human myocardial reperfusion. (Abstr)
Coghlan J, Flitter W, Holley A, **Norell M S**, Mitchell A, Ilsley C, Slater T.
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OUTSIDE INTERESTS

I enjoy being outdoors so walking (the dog), cycling, jogging, occasional golf and rare games of tennis, seem to suffice. I ski most years and sail when I can; I hold a RYA Day Skipper certificate and recently owned a 30 foot yacht.

I have been a member of the Royal Yachting Association and the Sherlock Holmes Society of London for the last 30 years. Having followed Tottenham Hotspur football club from childhood, I am now a Wolverhampton Wanderers season ticket holder.

Much of my spare time is quite rightly taken up with family, as well as writing. For the last 7 years I have contributed a regular column to the British Journal of Cardiology (“**The Oblique View**”) and to Cardiology News (“**Added Sounds**”). A collection of thirty or so of these articles were put together into a book (“The Oblique View: Cardiology from a Different Angle”) published by *tfn publishing* in 2007.