

APPENDIX A - ABBREVIATIONS

A&E	Accident & Emergency
ACT	Activated clotting time
ASA	American Society of Anesthesiologists
AV	Arteriovenous
AVM	Arteriovenous malformation
CC	Caroticocavernous
CCST	Certificate of Completion of Specialist Training
CNS	Central nervous system
CT	Computerised tomography
DVT	Deep vein thrombosis
ECG	Electrocardiogram
GCS	Glasgow coma scale
GDC	Guglielmi detachable coil
HDU	High dependency unit
ICU	Intensive care unit
IVC	Inferior vena cava
SAH	Subarachnoid haemorrhage
SHO	Senior house officer
SpR	Specialist registrar
SVC	Superior vena cava
THRIFT	Thromboembolic risk factors
TIPS	Transjugular intrahepatic portosystemic shunt
WFNS	World Federation of Neurological Surgeons

APPENDIX B - NCEPOD

CORPORATE STRUCTURE

The National Confidential Enquiry into Perioperative Deaths (NCEPOD) is an independent body to which a corporate commitment has been made by the Associations, Colleges and Faculties related to its areas of activity. Each of these bodies nominates members of the Steering Group.

Steering Group

(as at 1 October 2000)

Chairman

Mr John Ll Williams

Members

Mrs M Beck (Royal College of Ophthalmologists)

Dr J F Dyet (Royal College of Radiologists)

Dr H H Gray (Royal College of Physicians of London)

Dr P Kishore (Faculty of Public Health Medicine)

Mr G T Layer (Association of Surgeons of Great Britain and Ireland)

Professor V J Lund (Royal College of Surgeons of England)

Dr J M Millar (Royal College of Anaesthetists)

Dr A J Mortimer (Royal College of Anaesthetists)

Professor J H Shepherd (Royal College of Obstetricians and Gynaecologists)

Dr P J Simpson (Royal College of Anaesthetists)

Mr M F Sullivan (Royal College of Surgeons of England)

Professor P G Toner (Royal College of Pathologists)

Professor T Treasure (Royal College of Surgeons of England)

Dr D J Wilkinson (Association of Anaesthetists of Great Britain and Ireland)

Mr J Ll Williams (Faculty of Dental Surgery, Royal College of Surgeons of England)

Observers

Mr P Milligan (Institute of Health Services Management)

Dr P A Knapman (Coroners' Society of England and Wales)

NCEPOD is a company limited by guarantee, and a registered charity, managed by Trustees.

Trustees

Chairman Mr J Ll Williams

Treasurer Dr J N Lunn

Dr J Lumley

Dr P J Simpson

Mr M F Sullivan

Clinical Coordinators

The Steering Group appoint the Principal Clinical Coordinators for a defined tenure. The Principal Clinical Coordinators lead the review of the data relating to the annual sample, advise the Steering Group and write the reports. They may also from time to time appoint Clinical Coordinators, who must be engaged in active academic/clinical practice (in the NHS) during the full term of office.

Principal Clinical Coordinators

Anaesthesia Dr G S Ingram
Surgery Mr R W Hoile

Clinical Coordinators

Anaesthesia Dr A J G Gray
Dr K M Sherry

Surgery Mr K G Callum
Mr I C Martin

Funding

The total annual cost of NCEPOD is approximately £500,000 (1999/2000). We are pleased to acknowledge the support of the following, who contributed to funding the Enquiry in 1999/2000.

National Institute for Clinical Excellence
Welsh Office
Health and Social Services Executive (Northern Ireland)
States of Guernsey Board of Health
States of Jersey
Department of Health and Social Security, Isle of Man Government
Aspen Healthcare
BMI Healthcare
BUPA
Community Hospitals Group
Nuffield Hospitals
PPP/Columbia Healthcare
Benenden Hospital
King Edward VII Hospital, Midhurst
King Edward VII's Hospital for Officers, London
St Martin's Hospitals
The Heart Hospital
The London Clinic

This funding covers the total cost of the Enquiry, including administrative salaries and reimbursements for Clinical Coordinators, office accommodation charges, computer and other equipment as well as travelling and other expenses for the Coordinators, Steering Group and advisory groups.

APPENDIX C - DATA COLLECTION AND REVIEW METHODS

The National Confidential Enquiry into Perioperative Deaths (NCEPOD) reviews clinical practice and aims to identify remediable factors in the practice of anaesthesia, all types of surgery and other invasive procedures. The Enquiry considers the quality of the delivery of care and not specifically causation of death. The commentary in the reports is based on peer review of the data, questionnaires and notes submitted; it is not a research study based on differences against a control population, and does not attempt to produce any kind of comparison between clinicians or hospitals.

The concept of one-year studies reviewing interventional vascular and neurovascular radiological procedures represented a unique opportunity for collaboration between NCEPOD and the Royal College of Radiologists. The studies were also the first by NCEPOD to specifically collect denominator data on the total number of procedures performed.

The data collection and review methods common to the two studies are described below.

Scope

All National Health Service hospitals carrying out interventional radiology procedures in England, Scotland, Wales and Northern Ireland, and public hospitals in Guernsey and Jersey were invited to participate in the studies.

The period for which data was collected ran from 1 April 1998 to 31 March 1999 and participation was voluntary, being before the introduction of clinical governance and any requirement to take part in this type of Enquiry.

Data collection and review

Hospitals were invited, via the Director of Radiology, to participate in the study and to nominate a suitable person to take responsibility for submission of the necessary data. The names of those who agreed to undertake this task are shown in Appendices D and E, and were predominantly consultant radiologists.

Participating hospitals were asked to submit aggregated data on the total number of patients undergoing radiological procedures on a monthly basis. In addition, information was requested on any patient who died in hospital within 30 days of the procedure. If hospitals were aware of deaths occurring at home, they were invited to report these as well.

Review of deaths

For every case where NCEPOD was informed of a death within 30 days of the procedure, a questionnaire was sent to the relevant consultant radiologist. A copy of the full questionnaire is available from NCEPOD on request. The questionnaires were identified only by a number, allocated in the NCEPOD office. Copies of procedure notes, X-ray reports, postmortem notes and histology reports were also requested.

Data analysis

The NCEPOD administrative staff managed the collection, recording and analysis of data. The data were aggregated to produce the tables and information in the report.

Advisory groups

The designated NCEPOD Clinical Coordinator (K Callum), together with the advisory group members whose names are shown at the front of this report, reviewed the completed questionnaires and the aggregated data.

Confidentiality

NCEPOD is registered with the Data Protection Registrar and abides by the Data Protection Principles. All reporting forms, questionnaires and other paper records are shredded once an individual report is ready for publication. Similarly, all identifiable data are removed from the computer database.

Before review of questionnaires by the Clinical Coordinators or any of the advisors, all identification is removed from the questionnaires and accompanying papers. The source of the information is not revealed to any of the Coordinators or advisors.

APPENDIX D - LOCAL REPORTERS

Interventional vascular radiology

Hospitals are listed according to regional divisions in place at the publication date. It should be noted that regional boundaries have changed since the 1998/99 data collection period described in this report.

Eastern

Bedford Hospital	Dr R A Moxon
Norfolk & Norwich Hospital	Ms M Gracie
Peterborough District Hospital	Dr R E Moshy
Queen Elizabeth Hospital	Dr M Sparks
Watford General Hospital	Dr N Damani
West Suffolk Hospital	Dr R J Godwin

London

Chelsea & Westminster Hospital	Dr J McCall
Edgware General Hospital	Dr K Lotzof
Epsom General Hospital	Dr C D George
Farnborough Hospital	Dr R Carver
Greenwich District Hospital	Dr R Nagendran
Hammersmith Hospital	Professor A Hemingway
Hillingdon Hospital	Dr N Chetty
Kingston Hospital	Dr G Picken
Northwick Park Hospital	Dr R Wilkins
Oldchurch Hospital	Mrs A Deterville
St Bartholomew's Hospital	Dr C Blakeney
St Helier Hospital	Dr E A North
St Mary's Hospital	Dr R Morgan
St Thomas' Hospital	Dr A Irvine
The Middlesex Hospital	Dr M J Raphael

University Hospital Lewisham	Dr C Kennedy
West Middlesex University Hospital	Ms L Armistead
Whipps Cross Hospital	Dr N Reading

North West

Alder Hey Children's Hospital	Dr L Abernethy
Arrowe Park Hospital	Dr M Lipton
Blackburn Royal Infirmary	Ms P A Fenton
Chorley & South Ribble District General Hospital	Dr R C Stockwell
Countess of Chester Hospital	Dr G T Abbott
Furness General Hospital	Dr P J S Crawshaw
Halton General Hospital	Dr G J Murphy
Leighton Hospital	Dr S Zaman
Macclesfield District General Hospital	Dr C F Loughran
Manchester Royal Infirmary	Dr N Chalmers
North Manchester General Hospital	Dr A N Khan
Royal Albert Edward Infirmary	Dr C L Poon
Royal Bolton Hospital	Dr J S Tuck
Royal Lancaster Infirmary	Dr J M Lavelle
Royal Liverpool University Hospital	Dr D Gould
Royal Preston Hospital	Ms R Fowles
The Royal Oldham Hospital	Dr L L K Lee Cheong
The Victoria Hospital	Dr R W Bury
University Hospital, Aintree	Dr E A O'Grady
Warrington Hospital	Dr J McCaig
Withington Hospital	Dr R Ashleigh

Northern & Yorkshire

Bradford Royal Infirmary Dr S Chakraverty
Cumberland Infirmary Dr G Athey
Darlington Memorial Hospital Dr R G Henderson
Freeman Hospital Dr R J T Owen
Friarage Hospital Dr J M Randall
Harrogate District Hospital Dr J Rose
Hartlepool General Hospital Dr G J Doyle
Huddersfield Royal Infirmary Dr R A Paes
Hull Royal Infirmary Dr J Dyet
Leeds General Infirmary Ms D Marriott
North Tees General Hospital Dr N P Tait
North Tyneside General
Hospital Dr A W Edirisooriya
Pinderfields General Hospital Mr G Holdsworth
Scarborough Hospital Dr I G H Renwick
South Cleveland Hospital Dr G Leen
South Tyneside District Hospital Dr L Cope
St James's University Hospital Dr I Robertson
Sunderland Royal Hospital Dr S England
York District Hospital Mr A Magson

South East

Ashford Hospital Dr R Davies
Conquest Hospital Mrs K How
Eastbourne District General
Hospital Dr H Anderson
Frimley Park Hospital Ms S Connor
Kent & Canterbury Hospital Dr I D Morrison
Kettering General Hospital Dr S Peterson
Medway Maritime Hospital Dr K Reddy
Milton Keynes General Hospital Dr A Ul-Haq

Northampton General Hospital Dr R Kendrick
Princess Royal Hospital Dr I J Runcie
Queen Elizabeth the
Queen Mother Hospital Dr G Giancola
Royal Berkshire Hospital Dr E P H Torrie
Royal Hampshire County Hospital Dr A C Page
Royal Sussex County Hospital Dr T N Doyle
Southampton General Hospital Dr A Odurny
St Peter's Hospital Dr M F Creagh
St Richard's Hospital Dr N S Ashford
Stoke Mandeville Hospital Dr R Bodley
The John Radcliffe Hospital Dr P Bordman
The North Hampshire Hospital Dr G Plant
Wexham Park Hospital Dr M Charig
William Harvey Hospital Mr P French

South West

Bristol Royal Infirmary Professor M R Rees
Cheltenham General Hospital Dr M Gibson
Derriford Hospital Dr C A Roobottom
Frenchay Hospital Dr M H Morse
Gloucestershire Royal Hospital Dr P A Birch
Princess Margaret Hospital Dr L K Jackson
Royal Bournemouth Hospital Dr Shepherd
Royal Cornwall Hospital Dr K S Blanshard
Royal Devon and Exeter Hospital Dr C R Bayliss
Royal United Hospital Dr A Chalmers
Salisbury District Hospital Dr R A Frost
Taunton & Somerset Hospital Dr J Bell
Torbay District General Hospital Dr R H Fox
Yeovil District Hospital Dr N C G Bathurst

Trent

Barnsley District General Hospital.....	Dr D Nag
Chesterfield & North Derbyshire Royal Hospital	Dr A Cohen
Derbyshire Royal Infirmary	Dr D Hinwood
Diana Princess of Wales Hospital.....	Dr R W J Harries
Doncaster Royal Infirmary.....	Dr J Y Mackinlay
Glenfield Hospital	Dr R Keal
King's Mill Hospital	Dr P N Panto
Leicester General Hospital	Ms M Turner
Leicester Royal Infirmary.....	Dr G Fishwick
Lincoln County Hospital.....	Dr C I Rothwell
Northern General Hospital.....	Dr P A Gaines
Nottingham City Hospital	Dr A R Manhire
Pilgrim Hospital	Dr G M McGann
Rotherham District General Hospital.....	Dr P A Spencer
University Hospital, Nottingham	Dr R Gregson

West Midlands

Alexandra Hospital.....	Dr C Phillips
Birmingham Children's Hospital.....	Dr P John
Birmingham Heartlands Hospital.....	Dr P Crowe
Dudley Road Hospital.....	Dr M S Moss
George Eliot Hospital	Dr K A Vallance
Kidderminster General Hospital.....	Dr U L Udeshi
New Cross Hospital.....	Dr M Collins
Princess Royal Hospital.....	Dr R A Manns
Queen Elizabeth Hospital.....	Dr S P Olliff
Queen's Hospital	Dr K Nanda
Royal Shrewsbury Hospital	Dr M R E Dean

Russells Hall Hospital.....	Dr A P Wolinski
Sandwell General Hospital	Dr J Leahy
Walsgrave Hospital	Dr A Vohrah
Warwick Hospital.....	Dr F Millard
Worcester Royal Infirmary	Dr P L Slaney

Northern Ireland

Belfast City Hospital	Dr L Johnston
Royal Victoria Hospital	Dr P K Ellis

Scotland

Falkirk & District Royal Infirmary.....	Dr J E Barry
Gartnavel General Hospital.....	Dr R D Edwards
Glasgow Royal Infirmary.....	Dr A W Reid
Ninewells Hospital.....	Dr J W Shaw
Queen Margaret Hospital	Dr H Ireland
Raigmore Hospital	Dr D M Nichols
Royal Hospital for Sick Children	Dr A MacLennan
Royal Infirmary of Edinburgh	Dr G C McInnes
Victoria Infirmary	Dr A C Downie

Wales

Morrison Hospital	Dr D E Roberts
Neath General Hospital	Dr D E Roberts
Nevill Hall Hospital	Dr H Reed
Prince Philip Hospital.....	Dr T N W Evans
Princess of Wales Hospital.....	Dr W Tudor Young
Royal Glamorgan Hospital	Dr E Hicks
Royal Gwent Hospital	Dr B A Sullivan
University Hospital of Wales	Dr A M Wood
Ysbyty Glan Clwyd	Dr E H Moss
Ysbyty Gwynedd.....	Dr P D Birch

Channel Islands

Princess Elizabeth Hospital,
GuernseyDr J Hanaghan

Jersey General HospitalDr A P Nisbet

APPENDIX E - LOCAL REPORTERS

Interventional neurovascular radiology

Hospitals are listed according to regional divisions in place at the publication date. It should be noted that regional boundaries have changed since the 1998/99 data collection period described in this report.

Eastern

Addenbrooke's Hospital Dr J N P Higgins

London

Atkinson Morley's Hospital Dr A Clifton

Charing Cross Hospital Dr I R Colquhoun

Great Ormond Street Hospital
for Sick Children Dr W Taylor

King's College Hospital Dr M A Jeffree

Oldchurch Hospital Mrs A Deterville

The National Hospital for
Neurology & Neurosurgery Dr W Taylor

The Royal Free Hospital Dr A R Valentine

The Royal London Hospital Dr P Butler

North West

Hope Hospital Dr D G Hughes

Manchester Royal Infirmary Dr R D Laitt

Walton Centre for
Neurology & Neurosurgery Dr T Nixon

Northern & Yorkshire

Hull Royal Infirmary Dr C Rowland Hill

Leeds General Infirmary Dr M Nelson

Middlesbrough General Hospital Dr J Dervin

Newcastle General Hospital Dr A Gholkar

South East

Hurstwood Park Neurological Centre Dr J Olney

Radcliffe Infirmary Dr A J Molyneux

Southampton General Hospital Dr J Millar

South West

Frenchay Hospital Dr S A Renowden

Trent

Royal Hallamshire Hospital Dr T J Hodgson

University Hospital, Nottingham Dr T Jaspan

West Midlands

Queen Elizabeth Hospital Dr R West

Northern Ireland

Royal Victoria Hospital Dr H Kamel

Scotland

Southern General Hospital Dr J Bhattacharya

Western General Hospital Dr R Sellar

Wales

University Hospital of Wales Dr S Halpin

APPENDIX F - PARTICIPANTS

Consultant vascular radiologists

The following consultant vascular radiologists returned at least one questionnaire relating to the period 1 April 1998 to 31 March 1999.

Abbott G.	Jewell F.	Sampson C.
Alcorn D.	Jeyagopal N.S.	Scally J.
Alner M.R.	Johnson K.J.	Scott-Barrett S.
Aref F.	Keane A.	Seymour R.
Ashleigh R.A.	Kelly I.M.G.	Shepherd D.F.C.
Banerjee A.	Kendrick R.	Singanayagam J.K.
Birch P.A.	Kennedy C.	Sissons G.
Birch P.D.	Kinsella D.C.	Smith W.H.
Blanshard K.S.	Lakin K.L.H.	Sparks M.J.
Bowker A.M.B.	Lamb G.H.	Spencer P.A.
Bruce D.	Leahy J.F.	Stockwell R.C.
Cavanagh P.M.	Lee Cheong L.	Sullivan B.A.
Chakraverty S.	Leen G.	Tawn J.
Chalmers A.H.	Loose H.W.C.	Thavia V.R.
Chalmers N.	Lowe R.A.	Thomas H.G.T.
Charig M.	Mackie G.	Tottle A.J.
Cleveland T.	Malthouse S.	Toye R.
Cockburn J.F.	Marsh R.L.	Tuck J.S.
Cope L.H.	McCall J.M.	Turner P.J.
Corrigan N.	McConnell C.A.	Tuson J.
Crowe P.	McGann G.	Vohrah A.R.
D'Souza S.P.D.	McInnes G.C.	Walter D.F.
Dacie J.E.	McPherson S.J.	Watkin E.M.
Denunzio M.C.	McWilliams R.G.	Wells I.P.
Downie A.C.	Mitchell A.	West R.J.
Doyle G.J.D.	Morgan R.A.	Williams J.G.
Doyle T.N.	Morrison I.D.	Wood A.M.
Dux A.E.W.	Moss J.	Young W.T.
Dyet J.F.	Moss M.S.	
Edwards R.	Murphy G.J.	
England S.J.P.	Nagendran R.	
Ettles D.F.	Newland C.N.	
Fairlie N.	Nicholson A.A.	
Fawcitt R.A.	Odurny A.	
Ferrando J.R.	Olliff S.P.	
Fowler R.F.	Owen M.	
Frost R.A.	Owen R.O.	
Gaines P.A.	Page A.C.	
George C.D.	Panto P.N.	
Giancola G.	Pelling M.	
Gibson J.M.	Peterson S.	
Girling S.D.	Phillips-Hughes J.P.H.	
Godwin R.J.	Plant G.	
Gould D.	Procter A.E.	
Hacking N.	Raphael M.J.	
Hardman J.	Redhead D.	
Hartley R.	Reed D.H.	
Hayward S.	Renny F.H.B.	
Hinwood D.C.	Roberts D.	
Ignotus P.	Roobottom C.A.R.	
Isaacs J.L.	Rose J.D.G.	
Jackson L.K.	Runcie I.	

APPENDIX G - PARTICIPANTS

Consultant neurovascular radiologists

The following consultant neurovascular radiologists returned at least one questionnaire relating to the period 1 April 1998 to 31 March 1999.

Bartlett R.J.V.
Bhattacharya J.J.
Buckenham T.
Byrne J.V.
Clifton A.G.
Dervin J.E.
Gholkar A.
Halpin S.F.S.
Higgins J.N.P.
Hodgson T.J.
Hughes D.
Jaspan T.
McConachie N.S.
McKinstry S.
Molyneux A.J.
O'Sullivan M.
Rowland Hill C.A.
Sellar R.
Teasdale E.



