Specialty: Paediatrics

Subspecialty: Paediatric Intensive Care

Place of work: St Mary's Hospital, Praed Street, London W2 1NY, ENGLAND

Occupation: Consultant in Paediatric Critical Care Medicine
Home address: 8 Fordington Road, London N6 4TJ, ENGLAND

Phone: +44 20 3673 2188 Email: d.inwald@imperial.ac.uk Date and Place of Birth: 21st September 1965, London

Citizenship: British

Marital Status: Married, 3 children GMC Registration: Full 3460313

EDUCATION

1984-1987 Emmanuel College, University of Cambridge

Medical Sciences Tripos Part 1A (I), Part1B (IIi), Theological Studies Part 2 (IIi)

BA (Hons) degree

1987-1990 University College London School of Medicine,

MB BChir (Cantab) degrees

1993 Royal College of Physicians of the United Kingdom

MRCP (UK) diploma (Adult General Internal Medicine)

1994 Royal College of Physicians of the United Kingdom

Diploma of Child Health

2003 <u>Certificate of Completion of Specialist Training in Paediatrics</u>

Completed 2 year training programme in Paediatric Intensive Care medicine

2004-2006 King's College, London University

MA in Medical Law and Ethics (Merit)

ACADEMIC TRAINING

1998-2001 Medical Research Council Clinical Training Fellow, University College London

PhD in Child Health: 2004

MEDALS AND HONOURS

2014 Ivan Houghton Award Triservice Anaesthetic Society

2012 Pask Award Association of Anaesthetists of Great Britain and Ireland

1988 Sidney Long Prize in Surgery University College London Medical School
1987 Glover Prize for Hebrew Emmanuel College, Cambridge University

1987 Cambridge University Hebrew Prize Cambridge University

1986 Thorpe Exhibition Emmanuel College, Cambridge University 1985 Senior Hooper Scholarship Emmanuel College, Cambridge University

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Since 1993 – Member of the Royal College of Physicians

Since 1997 – Member of the Royal College of Paediatrics

Since 2006 – Fellow of the Royal College of Paediatrics

Since 2014 – Fellow of the Faculty of Intensive Care Medicine, Royal College of Anaesthetists

CONSULTANT AND LEADERSHIP POSITIONS

Dec 2013 – present Consultant in PICU, St Mary's Hospital NHS Trust and Honorary Senior Lecturer in Paediatrics, Imperial College, London, England

April 2008 – Dec 2013 HEFCE New Blood Clinical Senior Lecturer in Paediatric Intensive Care, Imperial College and Honorary Consultant in Paediatric Intensive Care, Imperial College Healthcare NHS Trust, London, England

Apr 2007 – July 2009 Service Director, PICU, St Mary's Hospital, London, England

Jan 2005 – Feb 2016 Honorary Consultant, Children's Acute Transport Service, London, England

Jan 2005 – April 2008 Consultant in PICU, St Mary's Hospital NHS Trust and Honorary Senior Lecturer in Paediatrics, Imperial College, London, England

MEDICAL LAW AND ETHICS

My undergraduate degree contained a significant philosophy component and I have an MA in Medical Law and Ethics from King's College London. I have published work on end-of-life care in children and on military medical ethics, with particular emphasis on triage and resource allocation in the austere environment. As a researcher I have become familiar with the processes required for research ethics approvals. I have provided expert witness reports to the Family Division of the High Court on end-of-life cases in children, to HM Coroner on causation in unexpected deaths in children and in medical negligence cases.

RESEARCH ACTIVITY AND ACHIEVEMENTS

Inflammation/sepsis

Co-Investigator, EUCLIDS (European Union Childhood Life threatening Infectious Diseases). Genetics of illness susceptibility and severity in meningococcal sepsis: Co-investigator on EU FP7 grant with Professor Mike Levin. 5-year FP7 project funded by the European Union (GA #279182, http://www.euclids-project.eu/home).

Cardiovascular Physiology – Supervised two student Cardiovascular Sciences BSc projects, looking at predictors of fluid bolus responsiveness in critically ill children. Now supervising an Academic ST3 Paediatrician to continue this work, also looking at biomarkers, aiming to obtain sufficient pilot data to support grant applications for further studies.

Clinical Trials

Chief Investigator, FiSh (Fluids in Shock). Principal Investigator on NIHR HTA grant to support an 18 month project combining a feasibility and external pilot study to inform the design and conduct of the Fluids in Shock (FiSh) trial, a proposed multicenter RCT of different size fluid bolus therapy in community acquired paediatric septic shock (13/04/105). Collaboration with Co-investigators in the Clinical Trials Unit at ICNARC (Intensive Care National Audit and Research Centre), PERUKI (Paediatric Emergency Research – UK and Ireland) and PICS SG (Paediatric Intensive Care Study Group). December 2015 – present (18 month project)

Local PI, CHiP (Control of Hyperglycaemia in PICU). CHiP was a randomised controlled trial of tight glycaemic control, with exogenous insulin therapy if necessary, against standard management, in inotrope dependent ventilated children in PICU. CI: Dr Duncan Macrae at the Royal Brompton Hospital and the trial was funded by the NIHR HTA, 2008 – 2011. Co-investigator with Dr Naz Pathan (NHLI) in a British Heart Foundation funded sub-project investigating the inflammatory and metabolic actions of tight glycaemic control following surgery for congenital heart disease.

Member, Data Monitoring and Ethics Committee, SCARF (Study of early Continuous positive Airways pressure in Acute Respiratory Failure). A randomized controlled trial early admission to the intensive care unit for continuous positive airways pressure (CPAP). January 2013 – June 2016

Safety

Local PI, EPOCH (Evaluation of Processes of care in Children in Hospital). CI: Dr Chris Parshuram at Toronto SickKids - a cluster randomized trial of a bedside Paediatric Early Warning System (PEWS).

Patient safety in Acute Paediatrics and PICU – collaborations with Professor Charles Vincent, at the Imperial Centre for Patient Safety and Service Quality, looking at patient safety factors in paediatric critical illness. MSc students supervised with research looking at prescribing safety, misdiagnosis and a case notes review looking at causes of death in PICU.

GRANTS IN LAST 5 YEARS

Fluids in Shock (FiSh). Chief Investigator. Co-investigators Prof Mike Levin, Dr Simon Nadel (Imperial), Dr Mark Peters (UCL), Dr Mark Lytlle (Bristol), Professor Kathy Rowan, Dr David Harrison, Dr Paul Mouncey (ICNARC). NIHR HTA – 2015: £519 294

Evaluating processes of care and the outcomes of children in hospital (EPOCH): a cluster randomized trial of the Bedside Paediatric Early Warning System. (CI: Christopher Parshuram, Toronto SickKids). Imperial PI in this international multicentre study. Imperial funding from Canadian Institute of Health Research and from NW London CLRN - 2012: £50 865

TEACHING ACTIVITY

Undergraduate:

I regularly teach and examine Imperial medical students in Paediatrics, including teaching ward rounds, ethics and law and Mini CEX and PACES assessments. Supervision of student BSc projects in cardiovascular physiology.

Postgraduate:

Regular lecturer on Imperial Paediatric MSc course in Acute Paediatrics, Intensive Care and Medical Law and Ethics. In 2015 I ran a two day postgraduate course in Medical Law and Ethics in Paediatrics at Imperial College, with excellent participant feedback. This course is now being delivered as a module in the Imperial Paediatrics MSc programme. I also teach on the King's College Medical Law and Ethics MA programme (https://www.youtube.com/watch?v=26NHjyJ_XwY).

Regular lecturer on Pan Thames PICU training programme for junior doctors, for which I have also written modules in respiratory failure, mechanical ventilation and research. Paediatric and Hospital Grand Rounds at St Mary's. Invited book chapters as below (publications).

Pastoral care:

I am Personal Tutor to a group of 25 Imperial medical students, having seen them progress from day one at Imperial, dealing with pastoral issues, career advice and support.

HIGHER PROFESSIONAL TRAINING

I held training posts in adult, paediatric and neonatal medicine, paediatric intensive care and surgery and anaesthesia. I have wide experience in neonatal and paediatric critical care medicine, including the medical management of neonates, infants and children following general and cardiac surgery. I am accredited as having completed the training programme in Paediatric Intensive Care Medicine with the Royal College of Anaesthetists. Details of this training are available on request.

RELEVANT PUBLICATIONS

Invited contributions

- 1. Akinkugbe O, **Inwald D** and New H. Patient consent in children, chapter in All Blood Counts, ed Thomas D, TFM publishing, Shropshire, UK, 2016.
- 2. Easby D, **Inwald DP** and McNicholas JJK. Ethical challenges of deployed critical care, chapter in Combat Anesthesia, *ed* Buckenmeier C, Borden Institute, Fort Detrick, MD, USA, 2014.
- 3. **Inwald DP**, Peters MJ: Emergency Medicine, chapter in the Great Ormond Street Illustrated Textbook of Paediatrics, ed Marks S, Manson Publishing, London, 2015
- 4. **Inwald D**, Vandyck W. Ethical debate: The distinction between withdrawing life sustaining treatment under the influence of paralysing agents and euthanasia. BMJ 2001;323:389-90

Articles in journals

- 1. **Inwald DP,** Arul GS, Montgomery M, Henning J, McNicholas J, Bree S. Management of children in the deployed intensive care unit at Camp Bastion, Afghanistan. J R Army Med Corps 2014;160:236-40
- 2. Monroe K, Wang D, Vincent C, Woloshynowych M, Neale G and **Inwald D**. Patient safety factors in children dying in a paediatric intensive care unit (PICU): a case notes review study. BMJ Quality and Safety 2011;20:863-8
- 3. **Inwald DP.** The best interests test at the end of life on PICU a plea for a family based approach. Arch Dis Child 2008;93248-250
- 4. **Inwald D**, Jakobovits I, Petros A. Brain stem death: managing care when accepted medical guidelines and religious beliefs are in conflict. BMJ. 2000;320:1266-7.

Selected invited lectures

- 1. Cultural considerations at the end of life in PICU. PICS, Cambridge, 2011
- 2. Pandemic flu. Who should we treat first adults or children? Ethical debate. RCPCH, York, 2007

Other conference contributions and abstracts

1. A critical appraisal of the best interests standard, as used in decisions to limit or withdraw life sustaining treatment in PICU, with reference to Re MB. **Inwald D**. RCPCH, York, 2007