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Education and Qualifications:

BSc (Hons) in Mathematics & Statistics (First Class), 1982, Edinburgh

Diploma in Mathematical Statistics, 1983, Cambridge (1982 - 1983)

PhD in Statistics, Diploma of Imperial College, 1986, London (1983 - 1986)

Chartered Statistician, Royal Statistical Society, 1994

Appointments held:

The University of Warwick: Professor (2004), Reader (2002), Senior Lecturer (2000),
Department of Statistics, October 2000.

The University of Newcastle: Senior Lecturer

Department of Mathematics & Statistics, January 1996- September 2000.

The University of Liverpool: Lecturer in Medical Statistics,

Departments of Statistics & Computational Mathematics, and Public Health, Oct 1986-Dec 1995.

Visiting appointments:

Visiting Professor of Biostatistics, Epidemiology unit, Cantonal Hospital of the University of Geneva:
December 1992 - February 1993.

Visiting Research Fellow, Department of Statistics, The University of Adelaide: March-June 1993

Membership of learned or professional societies:

Bernoulli Society;

International Biometric Society;

International Statistics Institute, Elected Fellow;

International Society for Biostatistics;

Royal Statistical Society;

Royal Society for Arts, Manufacture and Commerce, Fellow.

National and international recognition

Royal Statistical Society

Local groups: committee member, treasurer, secretary, 1989-1998, 2002.

Research section committee, 1996-1999.

Council member, 1997-2002.

Council representative on Council for Registration of Forensic Practitioners, 1998-2003.

Medical section committee, Chair 2002-2004, member 1999-2002.

Vice-president, 2001-2003.

International Biometric Society

Chair of Education Committee, Jan 2002 - Dec 2003.

Chair of Short Course Committee, Sep 2002 - July 2004.

Member of working group on future of IBS, Jan - Dec 2002.

Member of Education Committee, Jan 2004 - Dec 2005.

Editorial and advisory

Guest editor, *Statistics in Medicine*, 1990, Vol 9(9).

Associate & deputy editor, *Health & Social Care in the Community*, 1991-2000.

Associate editor, *J Royal Statistical Society (C) 'Applied Statistics'*, 1995-1998

Local groups editor, *RSS NEWS*, 1995-1999

Member of Editorial Board, *Cochrane Collaboration on Epilepsy*, 1995 -

Member of Research Section, *RSS*, 1996-1999.

Statistical Consultant, *Surveillance of Cerebral Palsy in Europe*, 1998-2002.

Writing group, *MRC Guidelines on ethics of cluster randomised designs*, 2001-2002.

MRC CPBAR working group on experimental design, 2003-

Committee of Mathematical Sciences Bologna working group, 2006-2009

Wellcome Trust, *Study Design Expert Group*, Oct 2007-Feb 2011.

Referee for several UK research councils, and NIHR TCC Panel.

Member of Core Methodology Panel, NIHR, 2011-

Expert witness

Life expectancy in cerebral palsy, UK, USA, Eire, Hong Kong, Australia, South Africa, ongoing, over 100 cases.

Adverse effects of anti-epileptic drug, 2007-2008.

General Medical Council, *Fitness to Practice Panel*, 2008.

Director of schools and conference organisation

RSS Conferences organising committees, 1992 & 1998; invited 2000.

Scientific committee member: *International Society for Clinical Biostatistics conference*, 1998.

Lead Director of school: 'Modern statistical methods in medical research', *International Centre for Theoretical Physics, Trieste, Italy*, 1999.

Co-organiser: 'Modern approaches to analysis of genetic data', *RSS and Biometric Society*, 1999.

Co-organiser: 'Ethics, integrity and clinical trials', *RSS and PSI*, 2002.

Chair, short course committee, *IBS conference* 2004.

Research

My research is focused on statistical methods, applications of statistics to health care, and ethics. Society is increasingly aware of the value of transparent decision-making. Evidence-based medicine, which is part of this trend, requires decisions on what constitutes evidence and its systematic collection, as well as appropriate synthesis and effective dissemination of the information. This often requires multi-disciplinary collaboration. I have contributed to many publications and grant applications. (Research grant won are given in the table.)

My principal theoretical interests are survival analysis and meta-analysis, including the impact of missing data. I have extensive interdisciplinary research networks, both nationally and internationally, and a wide understanding of the range of problems addressed in medical and other research. My current major medical collaborations are in *cerebral palsy* and *epilepsy*.

Survival analysis, the investigation of factors which affect time to events of interest, such as cure, is a major area of medical research, and is also used in economics and engineering. I have researched the connections between, and merits of, two classes of survival models: proportional hazards and accelerated life models. The former has transformed the analysis of medical data in the last two decades. Engineering and economics commonly use accelerated life models to study patterns of failure times. We proved that, in general, inferences can differ substantially with the model class [40, 52, 62], so that accelerated life models must be considered in medical statistics, particular with variable quality data. Work on data quality issues such as measurement error, missing data and combining data from different sources [56, 62, 70, 92, 93, 98, 99] continues.

My applications of survival analysis in *cerebral palsy* [20, 37, 43, 51, 69, 72, 78, 80] and brain tumours and *epilepsy* [10, 14, 24, 76] have had substantial impact. Our results showing that people with *cerebral palsy* live much longer than previously assumed has transformed health and social service planning. We are one of only two expert teams internationally who are called to give expert evidence on the survival of people with *cerebral palsy*.

Evidence-based medicine aims to give patients therapies which are medically and socially effective and to ensure fair distribution of resources. I work on both methodological [40, 46, 47, 53, 54, 55, 79, 88] and substantive issues [32, 57, 81, 82, 97, 95] in systematic reviews, particularly in connection with meta-analysis of survival data. I have collaborated in many of the systematic reviews which provide the leading international summaries of treatments for people with *epilepsy* [102, 101, 103, 104, 105, 106, 107]. Further questions on bias in meta-analysis, with applications to on epilepsy therapies are being investigated through a Medical Research Council grant. Clear communication of results is very important, so I investigated the properties and problems of a flawed statistic (number needed to treat) which was being promoted for dissemination of research results [39]. Less technical articles have been disseminated in medical journals [89, 96].

I have always been interested in science more widely than medicine, and so joined a a collaboration between physics, chemistry and statistics for a centre for analytical sciences, funded by EPSRC.

My interest in the interplay of information, knowledge, truth and ethics led to my scholarly work on **ethics and statistics** [23, 27, 33, 41, 42, 44, 48, 50, 83, 86]. Part of the work has been supported by NHS grants [31, 34]. This has been recognized by the Medical Research Council, which invited me to have a major role in writing new good practice guidelines for cluster randomized designs [61] and collaborate in evaluating animal research [91]. I have had several national and international invitations to speak and write on statistics and ethics.

Research grants held

Source of funds	Title	Start Date	Mths	Total (K £)
Grants as principal investigator:				
MRHA	Life expectancy & cerebral palsy (CP)	1/89	12	£9
NWCRF	Statistical Methods for the Control of Cancer	10/94	36	£63
NHSE	Implications of socio-cultural contexts for ethics of clinical trials	11/95	12	£48
WRI	Measurement error in repeated measurements	1/96	12	£13
NHSE	Life expectancy, North England CP cohort (N&Y)	10/97	12	£2
EPSRC	Measurement error in longitudinal data	10/97	36	£45
MRC	Life expectancy in cerebral palsy: UK collaboration	2/01	36	£229
MRC	Models for selection bias, applied to controlled trials and observational studies of anti-epileptic drugs	7/05	36	£199
Sub-total				£858
Grants as co-investigator:				
MRC	Individual patient data meta-analysis, epilepsy P R Williamson (PI)	5/98	24	£70
DoH, NHS	Methods to identify urinary incontinence M Pearson (PI)	5/94	18	£160
NHSE	Expanding the systematic review paradigm RJ Lilford (PI)	10/97	24	£40
NHSHTA	A randomised control trial of four methods of & cost of support in severe ankle sprains MW Cooke (PI), S Lamb (PI)	9/02	36	£388
NI R&D	Monitoring socio-economic inequalities in pregnancy outcome in Northern Ireland, with national comparisons Helen Dolk (PI)	02/03	36	£151
EPSRC	Statistical questions in meta analysis;J B Copas (PI)	07/04	36	£191
DfT	Systematic review of the probability of future seizures after an initial seizure or other risk creating event C Hawley (PI)	05/04	6	£48
NIHR	Defining priorities and communicating evidence about interventions for epilepsy AG Marson (PI)	7/08	60	£533
EPSRC	Warwick Centre for Analytical Science;M Smith, (PI)	10/08	60	£3,698
Total				£6,137

DoH: Department of Health; EPSRC: Engineering & Physical Sciences Research Council;
 MRHA: Mersey Regional Health Authority; MRC: Medical Research Council;
 NHSE National Health Service Executive; NWCRF: North West Cancer Research Fund;
 N & Y Northern & Yorkshire; WRI: Westlakes Research Institute.

Teaching

As a statistician, my teaching expertise is highly valued by mathematical specialists as well as a very wide range of subject areas and professions. Feedback on my teaching of statistics and service courses has consistently been very good. A Quality Assurance Agency inspector described my service course lectures as “very good, clear and well presented”. I have experience of teaching in several countries, and to students of many nations.

Statistics and mathematics students

Within mathematics and statistics honours degrees, I have taught at all levels, including courses on statistical inference, generalised linear models, survey sampling, survival analysis, and medical statistics. I use a variety of styles in teaching. I also enable mathematics and statistics students to gain skills in presentation, leadership, team work, time management, literacy and assertiveness, pioneered the use of group projects within mathematics degrees. My collaborative research provides popular projects for fourth year and MSc statistics students.

Service teaching

I have developed and delivered lectures and modules for a variety of disciplines in science, engineering and health care. My work as a consulting statistician, a statistical referee and editor, and in multi-disciplinary research has allowed me to adapt core material to particular groups, such as paediatricians, dentists, and nurses, by using examples from recent research.

Continuing professional development

I have contributed to the Royal Statistical Society Continuing professional development programme, and to continuing medical professional development through lecture series and short courses. My teaching ability is recognised nationally and internationally. I have been invited to give several seminars to lawyers, and have written guidelines for refereeing and study design. I was invited to be lead director of an international school on biostatistics at the International Centre for Theoretical Physics. As Chair of the International Biometric Society Education Section, I have organised short courses in Africa and Australia. I have taught at the African Institute of Mathematical Sciences.

Supervising teaching

For the six years, I worked with the University of Warwick’s Learning Development Centre in providing training for PhD students in preparation for their giving tutorials and marking undergraduate work. I developed the content of the course to be relevant to mathematics and statistics.

Academics in the UK are required to follow training in teaching methods as part of their probation. I am currently in charge of the specialist Mathematics and Statistics option at the University of Warwick. Staff in physics, computer science and complexity also choose this option over the standard option. As well as arranging relevant courses, I mark the dissertations and the portfolios.

Research Supervision:

I have supervised eleven successful PhD research students since 1998. I have three current research students, two of whom are jointly supervised.

External examiner:

Professions Allied to Medicine research methods course, University of Liverpool, 2000-2003.

MSc Statistics, London School of Economics, 2004-2008.

PhD theses: McQuarrie University, Australia, University of Lancaster; University of Paris XI, France.

MPhil theses: Khartoum University, Sudan; University of Wales at Swansea; University of Oxford.

Administration and other service

Administration and contributions to the University of Warwick

- PhD admissions tutor, 2009-.
- Director, Mathematics and Statistics post-graduate certificate in professional practice 2009-.
- Member of Senate, 2007-2010.
- Chairman, Department of Statistics, 2005-2008.
- Board of Faculty of Social Science, 2005-2008.
- Post-graduate admissions tutor, 2003-2005
- Faculty Board of Graduate Studies, 2003 -2005.
- Review Panel Member, Warwick Business School, Business & Management BSc courses, 2003.
- Member of Review Group, Institute of Governance and Public Management, 2003.
- Mentor for Warwick Teaching Certificate, 2002-2004.
- User committee, new mathematics and statistics building, 2001-2003; 2007-2008.
- Occasional statistical advice and seminars for administrative staff, 2001-.
- Liaison with Leicester-Warwick Medical Schools, Institute of Health, 2000-2005.
- Board of Faculty of Medicine, 2000-2006.
- Board of Faculty of Social Science, 2000-2003.
- Equal Opportunities Committee, 2000-2010

Publications

- [1] M N Hartley, D J Tufnell, J L Hutton, M Palmer, and M S Al Jafari. Fine needle aspiration cytology: an in-vitro study of cell yield. *Br. J. Surg.*, 75:380–381, 1988.
- [2] J M Escala, M A Keating, G Boyd, A Pierce, J L Hutton, and J Lister. Development of elastic fibres in the upper urinary tract. *J. Urol.*, 141:969–973, 1989.
- [3] B T Parys, B T Haylen, J L Hutton, and K F Parsons. The effects of simple hysterectomy on vesicourethral function. *Br. J. Urol.*, 64:594–599, 1989.
- [4] J L Hutton. Non-negative time series models for dry river flow. *J. Appl. Prob.*, 27:171–182, 1990.
- [5] N Modi and J L Hutton. The influence of postnatal respiratory adaptation on sodium handling in preterm neonates. *Early Human Dev.*, 21:11–20, 1990.
- [6] N Modi and J L Hutton. Urinary creatinine excretion and estimation of muscle mass in infants 25–34 weeks gestation. *Acta Scand. Paed.*, 79:1156–1162, 1990.
- [7] R Carr, J L Hutton, J Jenkins, J A Lucas, and N W Amphlett. Transfusion of ABO mismatched platelets leads to early platelet refractoriness. *Br. J. of Haem.*, 75:408–413, 1990.
- [8] B T Parys, B T Haylen, J L Hutton, and K F Parsons. Urodynamic evaluation of lower urinary tract function in relation to total hysterectomy. *Aust & New Zealand J of Obs and Gyne*, 30:161–165, 1990.
- [9] B T Parys, B T Haylen, J L Hutton, and K F Parsons. Neurophysiological reflex arc abnormality after total hysterectomy. *Int Urogynec J*, 1:200–205, 1990.

- [10] D F Smith, J L Hutton, D Sandemann, P M Foy, M D M Shaw, I R Williams, and D W Chadwick. The prognosis of primary intracerebral tumours presenting with epilepsy: the outcome of medical and surgical management. *J Neurology, Neurosurgery & Psych*, 54:915–920, 1991.
- [11] K Moore, D Richmond, J Sutherst, A Imrie, and J L Hutton. Crouching over the toilet seat: Prevalence amongst British women and and effect upon micturation. *Brit J Obs & Gyne*, 98:569–572, 1991.
- [12] B T Parys and J L Hutton. Fifteen-year experience of carcinoma of the scrotum. *Br. J. Urol.*, 68:414–417, 1991.
- [13] J K M Duguid, R Carr, J A Jenkins, J L Hutton, G F Lucas, and J M Davies. Clinical evaluation of the effects of storage time irradiation on transfused platelets. *Vox Sanguis*, 60:151–154, 1991.
- [14] J L Hutton, D F Smith, D Sandemann, P M Foy, M D M Shaw, I R Williams, and D W Chadwick. Development of a prognostic index for use in a trial of medical and surgical management of primary intracellular tumours. *J Neurology, Neurosurgery & Psych*, 55:271–274, 1992.
- [15] S A Hinchcliffe, P L Sargent, Y F Chan, D Vanvelzen, C V Howard, and J L Hutton. Medullary ray glomerular ray counting as a method of assessment of human nephrogenesis. *Path Res Pract*, 188:775–782, 1992.
- [16] J L Hutton and R G Owens. Bayesian sample size calculations and prior beliefs about child sexual abuse. *The Statistician*, 42:399–404, 1993.
- [17] J L Hutton, R G Owens, L Horne, and D V Glasgow. Professionals’ beliefs about child sexual abuse. *Health & Social Care in the Community*, 1:219–226, 1993.
- [18] D Ashby, J L Hutton, and M A McGee. Simple Bayesian analyses for case-control studies in cancer epidemiology. *The Statistician*, 42:385–397, 1993.
- [19] G Hackett, P Bundred, J L Hutton, J O’Brien, and I M Stanley. Management of joint and soft tissue injuries in three general practices. *Brit J Gen Prac*, 43:61–64, 1993.
- [20] J L Hutton, T Cooke, and P O D Pharoah. Life expectancy in children with cerebral palsy. *Brit. Med. J.*, 309:431–435, 1994.
- [21] B H Roe, J M Griffiths, M Kenrick, N A Cullum, and J L Hutton. Nursing treatment of patients with chronic leg ulcers in the community. *J of Clin Nursing*, 3:159–168, 1994.
- [22] M J Diver, J G Hughes, J L Hutton, C R West, and L J Hipkin. The long-term stability in whole blood of 14 commonly requested hormone analytes. *Ann of Clin Biochem*, 31:561–565, 1994.
- [23] J L Hutton. Statistics is essential for professional ethics. *J.Appl.Phil*, 12:253–261, 1995.
- [24] J L Hutton, D F Smith, and D W Chadwick. Prospective evaluation of a prognostic index for intrinsic supratentorial tumours. *J of Neurology, Neurosurgery and Psych*, 59:92–94, 1995.
- [25] CJ Green, IT Campbell, P McClelland, JL Hutton, MM Ahmed, TR Helliwell, RG Wilkes, AA Gilbertson, and JM Bone. Energy and nitrogen balance and changes in midupper-arm circumference with multiple organ failure. *Nutrition*, 11:739–746, 1995.
- [26] D Ashby and J L Hutton. Bayesian epidemiology. In *Bayesian Biostatistics (ed D. Berry and D. Stangl)*, pages 109–138. New York: Marcel Dekker, 1996.

- [27] J L Hutton. The ethics of randomised controlled trials: A matter of statistical belief. *Health Care Anal.*, 4:95–102, 1996.
- [28] A M Weindling, P Hallam, J Gregg, H Klenka, L Rosenbloom, and J L Hutton. A randomized controlled trial of early physiotherapy for high-risk infants. *Acta Paediatrica*, 85:1107–1111, 1996.
- [29] J L Hutton and P J Solomon. Parameter orthogonality in mixed regression models for survival data. *J.R.Statist.Soc. B*, 59:125–136, 1997.
- [30] J L Hutton, P O D Pharoah, R W I Cooke, and R C Stevenson. The differential effects of prematurity and dysmaturity on cognitive and motor development. *Arch. Dis. Ch.*, 76:F75–F81, 1997.
- [31] R E Ashcroft, D W Chadwick, S R L Clark, R H T Edwards, L Frith, and J L Hutton. Implication of socio-cultural contexts for the ethics of clinical trials. *Health Technology Assessment*, 1(9):iv+65, 1997.
- [32] A G Marson, Z A Kadir, J L Hutton, and D W Chadwick. The new anti-epileptic drugs: A systematic review of their efficacy and tolerability. *Epilepsia*, 38:859–880, 1997.
- [33] J L Hutton. Medical ethics and statistics. In *Encyclopedia of Biostatistics (Ed. D G Altman, E A Gehan, P Armitage and T Colton)*, pages 2540–2546. John Wiley and sons, London, 1998.
- [34] J L Hutton and R E Ashcroft. What does “systematic” mean for reviews of methodology? In *Health Services Research Methods: A guide to best practice (Ed. N Black, J Brazier, R Fitzpatrick and B Reeves)*, pages 249–254. Brit. Med. J., London, 1998.
- [35] R E Ashcroft, D W Chadwick, S R L Clark, R H T Edwards, L Frith, and J L Hutton. Implication of socio-cultural contexts for the ethics of clinical trials. In *Health Services Research Methods: A guide to best practice (Ed. N Black, J Brazier, R Fitzpatrick and B Reeves)*, pages 108–116. Brit. Med. J., London, 1998.
- [36] P L Cornelissen, P C Hansen, J L Hutton, V Evangelinou, and J F Stein. Magnocellular visual function and children’s single word reading. *Vision Research*, 38:471–482, 1998.
- [37] G Maudsley, J L Hutton, and P O D Pharoah. Cause of death in cerebral palsy: a descriptive study. *Arch. Dis. Ch.*, 81:390–394, 1999.
- [38] M Buyse, S L George, S Evans, N L Geller, J Ranstam, B Scherrer, E Lesaffre, G Murray, L Edler, J L Hutton, T Colton, P Lachenbruch, and B L Verma. The role of biostatistics in the prevention, detection and treatment of fraud in clinical trials. *Statist.Med.*, 18:3435–3451, 1999.
- [39] J L Hutton. Number needed to treat: properties and problems. *J.R.Statist.Soc. A*, 163:403–419, 2000.
- [40] J L Hutton and P R Williamson. Bias in meta-analysis with variable selection within studies. *Appl. Statist.*, 49:359–370, 2000.
- [41] J L Hutton. Ethics of medical research in developing countries: the role of international codes of conduct. *Stat. Meth. Med. Res.*, 9:185–206, 2000.
- [42] J L Hutton and R E Ashcroft. Some popular versions of uninformed consent. *Health Care Anal.*, 8:41–52, 2000.

- [43] J L Hutton, A F Colver, and P C Mackie. Effect of severity of disability on survival in north east England cerebral palsy cohort. *Arch. Dis. Ch.*, 83:468–474, 2000.
- [44] P R Williamson, J L Hutton, J Bliss, J Blunt, M J Campbell, and R Nicholson. Statistical review by research ethics committees. *J.R.Statist.Soc. A*, 163:5–13, 2000.
- [45] J Ranstam, M Buyse, S L George, S Evans, N L Geller, B Scherrer, E Lesaffre, G Murray, L Edler, J L Hutton, T Colton, and P Lachenbruch. The biostatistician’s view of fraud in medical research. *Con. Clin. Trials.*, 21:415–427, 2000.
- [46] P R Williamson, A G Marson, C Tudur, J L Hutton, and D W Chadwick. Individual patient data meta-analysis of randomised anti-epileptic drug monotherapy trials. *J Eval Clin. Pract.*, 6:207–214, 2000.
- [47] S Hahn, P R Williamson, J L Hutton, P Garner, and V Flynn. Assessing the potential for bias in meta-analysis due to selective reporting of subgroup analyses within studies. *Statist.Med.*, 19:3325–3336, 2000.
- [48] J L Hutton. Are distinctive ethical principles required for cluster randomised controlled trials? *Statist.Med.*, 20:473–488, 2001.
- [49] R J Lilford, S Edwards, R Fitzpatrick, J L Hutton, A Stevens, A Richardson, and F Rock. Issues in methodological research: perspectives from researchers and commissioners. *Health Technology Assessment*, 5(8):59+iv, 2001.
- [50] J L Hutton. Medical ethics and statistics. In *Biostatistics in Clinical Trials (Ed. CK Redmond and T Colton)*, pages 257–271. John Wiley and sons, London, 2001.
- [51] J L Hutton and P O D Pharoah. Effects of cognitive, sensory and motor impairment on the survival of people with cerebral palsy. *Arch. Dis. Ch.*, 86:84–89, 2002.
- [52] J L Hutton and P F Monaghan. Choice of accelerated life and proportional hazards models for survival data: asymptotic results. *Lifetime Data Analysis*, 8:375–393, 2002.
- [53] P R Williamson, H Clough, J L Hutton, A Marson, and D W Chadwick. Statistical issues in the assessment of the evidence for an interaction between factors in epilepsy trials. *Statist.Med.*, 21:2613–2622, 2002.
- [54] P R Williamson, C T Smith, J L Hutton, and A G Marson. Aggregate data meta-analysis with time-to-event outcomes. *Statist.Med.*, 21:3337–3351, 2002.
- [55] S Hahn, P R Williamson, and J L Hutton. Investigation of within-study selective reporting in clinical research: Follow-up of applications submitted to an LREC. *J Eval Clin. Pract.*, 8:353–359, 2002.
- [56] J L Marsh, J L Hutton, and K Binks. Removal of radiation dose response effects: an example of over-matching. *Brit. Med. J.*, 325:327–330, 2002.
- [57] A G Marson, P R Williamson, H Clough, J L Hutton, and D W Chadwick. Carbamazepin and valproate monotherapy for epilepsy: a meta-analysis. *Epilepsia*, 43:505–513, 2002.
- [58] AK Sharma, M Callaghan, R Rustom, J L Hutton, A Hammad, and RA Sells. Cyclosporine nephrotoxicity: Is it determined by donors predisposition? *Transplantation*, 2002. Short communication.

- [59] H O Dickinson, J L Hutton, LH Greaves, T J B Dummer, and L Parker. Stillbirth risk in rural and urban areas. *Paed. & Perin. Epid.*, 16:249–254, 2002.
- [60] L S Pearson and J L Hutton. A controlled trial to compare the ability of foam swabs and toothbrushes to remove dental plaque. *J. Adv. Nurse.*, 39:480–489, 2002.
- [61] MRC clinical trial series. *Cluster randomised trials: Methodological and ethical considerations*. Medical Research Council, London, 2002.
- [62] G Kwong and J L Hutton. Choice of parametric models in survival analysis: applications to cerebral palsy and monotherapy for epilepsy. *Appl. Statist.*, 52:163–168, 2003.
- [63] SN Jarvis, SV Glinianaia, MG Torrioli, MJ Platt, M Miceli, PS Jouk, A Johnson, JL Hutton, G Hagberg, H Dolk, J Chalmers, and K Hemming. Cerebral palsy and intrauterine growth in single births: a European collaborative study. *Lancet*, 362:1106–1111, 2003.
- [64] J E Gach, A M Madrigal, J L Hutton, and R Charles-Holmes. Retrospective analysis of the occurrence of internal malignancy in patients treated with PUVA between 1986-1999 in South Warwickshire. *Clinical and Experimental Dermatology*, 29:154–155, 2003.
- [65] M Topp, L D Huusom, J Langhoff-Roos, C Delhumeau, JL Hutton, and H Dolk. Multiple birth and cerebral palsy in Europe: a multicenter study. *Acta Obstet Gynecol Scand*, 83:548–553, 2004.
- [66] J L Hutton. Ethics, justice and statistics. In *International seminar on nuclear war and planetary emergencies: 30th Session*, pages 212–217. World Scientific, Singapore, 2004.
- [67] J L Hutton. Medical ethics and statistics. In *Encyclopedia of Biostatistics 2nd ed (P Armitage and T Colton)*, volume 5, pages 3137–3148. John Wiley and sons, London, 2005.
- [68] P R Williamson, C Gamble, DG Altman, and J L Hutton. Outcome selection bias in meta-analysis. *Stat. Meth. Med. Res.*, 14:515–524, 2005.
- [69] K Hemming, JL Hutton, A Colver, and MJ Platt. Regional variation in survival of people with cerebral palsy in the United Kingdom. *Pediatrics*, 116:1383–1390, 2005.
- [70] B J Cowling, J L Hutton, and J E H Shaw. Joint modelling of event counts and survival times. *Appl. Statist.*, 55:31–39, 2006.
- [71] K Hemming, JL Hutton, SV Glinianaia, SN Jarvis, and MJ Platt. Differences between European birth weight standards: impact on small for gestational age classification. *Dev. Med. & Child. Neur.*, 48:906–912, 2006.
- [72] K Hemming, JL Hutton, and POD Pharoah. Long term survival for a cohort of adults with cerebral palsy. *Dev. Med. & Child. Neur.*, 48:90–95, 2006.
- [73] P O D Pharoah and J L Hutton. Life expectancy in severe cerebral palsy. *Arch. Dis. Ch.*, 91:254–258, 2006. doi: 10.1136/adc.2005.075002.
- [74] RA Nakash, JL Hutton, EC Jorstad, and SE Lamb. Maximising response to postal questionnaires - a systematic review of randomised trials in health research. *BMC Med Res Meth.*, 6:5, 2006.
- [75] J L Hutton. Cerebral palsy life expectancy. *Clin. Perinatol*, 33:545–555, 2006.

- [76] BJ Cowling, JEH Shaw, JL Hutton, and AG Marson. New statistical method for analysing time to first seizure: example using data comparing carbamazepine and valproate monotherapy. *Epilepsia*, 48:1173–1178, 2007.
- [77] RA Nakash, JL Hutton, SE Lamb, S Gates, and J Fisher. Response and non-response to postal questionnaire follow-up in a clinical trial - a qualitative study of the patient’s perspective. *BMC Med Res Meth.*, 14:226–235, 2008. doi:/10.1111/j.1365-2753.2007.00838.x.
- [78] K Hemming, JL Hutton, S Bonellie, and J Kurinczuk. Interuterine growth and survival in cerebral palsy. *Arch Dis Child Fetal Neonatal Ed*, 93:F121–F126, 2008. doi:10.1136/adc.2007.121129.
- [79] K Hemming, JL Hutton, MJ Maguire, and AG Marson. Open label extension studies and patient selection biases. *J Eval Clin Pract*, 14:141–144, 2008. doi: 10.1111/j.1365-2753.2007.00821.x.
- [80] K Hemming, A Colver, JL Hutton, POD Pharoah, and J Kurinczuk. The influence of gestational age on severity of disability in bilateral and unilateral spastic cerebral palsy. *J. Peds*, 153:203–208.e4, 2008.
- [81] M Maguire, K Hemming, AG Marson, and JL Hutton. Reporting and analysis of open-label extension studies of anti-epileptic drugs. *Epilepsy Research*, 81:24–29, 2008.
- [82] M Maguire, K Hemming, AG Marson, and JL Hutton. Overwhelming heterogeneity in systematic reviews of observational anti-epileptic studies. *Epilepsy Research*, 80:201–212, 2008.
- [83] JC Hughes, J Newby, SJ Louw, G Campbell, and JL Hutton. Ethical issues and tagging in dementia: a survey. *J Ethics Mental Health*, 3:1–6, 2008. Available via www.jemh.ca.
- [84] SE Lamb, JL Marsh, JL Hutton, R Nakash, and MW Cooke. Mechanical supports for acute, severe ankle sprains: a pragmatic, multi-centre, randomised controlled trial. *Lancet*, 373:575–581, 2009.
- [85] MW Cooke, JL Marsh, M Clark, R Nakash, RM Jarvis, JL Hutton, A Szszeper, S Wilson, and S Lamb. Treatment of severe ankle sprain: a pragmatic randomised controlled trial comparing clinical and cost-effectiveness of three types of mechanical ankle support with tubigrip. the CAST trial. *Health Technology Assessment*, 11(13):iv+100, 2009. <http://www.hta.ac.uk/project/1309.asp>.
- [86] J L Hutton, M Eccles, and J M Grimshaw. Ethical issues in implementation research: a discussion of the problems in achieving informed consent. *Implementation Science*, 3:<http://www.implementationscience.com/content/3/1/52>, 2009.
- [87] PK Kimani, N Stallard, and JL Hutton. Dose selection in seamless phase (II/III) clinical trials based on efficacy and safety. *Statist.Med.*, 28:917–936, 2009.
- [88] G Surman, K Hemming, M J Platt, J Parkes, A Green, J L Hutton, and J J Kurinczuk. Children with cerebral palsy: severity and trends over time. *Paed. Peri Epidem.*, 36:513–21, 2009. DOI: 10.1111/j.1365-3016.2009.01060.x.
- [89] J L Hutton. Number needed to treat and number needed to harm are not the best way to report and assess the results of randomised clinical trials. *B. J. Haem*, 146:27–30, 2009. Invited review.
- [90] K Hemming, JL Hutton, and S Bonellie. A comparison of customized and population-based birth-weight standards: The influence of gestational age. *Eur.J.Obs. & Gyne. Rep. Biol.*, 146:41–45, 2009.

- [91] C Kilkenny, N Parsons, E Kadyszewski, MFW Festing, IC Cuthill, D Fry, JL Hutton, and DG Altman. Survey of the quality of experimental design, statistical analysis and reporting of research using animals. *PLOS one*, 2009.
- [92] K Hemming and JL Hutton. Bayesian sensitivity models for missing covariates in the analysis of survival data. *J Eval. Clin. Pract.*, 2010. doi: 10.1111/j.1365-2753.2010.01569.x.
- [93] J Anzures-Cabrera and J L Hutton. Competing risks and left truncation in A-bomb long-term survivors. *J App. Stat.*, 37:821–831, 2010.
- [94] K Hemming, JL Hutton, MG Maguire, and AG Marson. Meta-regression with partial information on summary trial or patient characteristics. *Statist.Med.*, 2010. DOI: 10.1002/sim.3848.
- [95] Carol Hawley and JL Hutton. Systematic review of the probability of future seizures after initial seizure or other event creating an increased future risk. 2010. <http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme6/report5/>.
- [96] J L Hutton. Misleading statistics: the problems surrounding number needed to treat and number needed to harm. *Pharm. Med.*, 24:145–149, 2010. Invited, refereed review.
- [97] M Maguire, K Hemming, JM Wild, JL Hutton, and A Marson. Prevalence of visual field loss following exposure to vigabatrin therapy: A systematic review. *Epilepsia*, pages 1–9, 2010. doi: 10.1111/j.1528-1167.2010.02772.x.
- [98] JL Hutton and E Stanghellini. Modelling bounded health scores with censored skew-normal distributions. *Statist.Med.*, 31:368–376, 2011. DOI: 10.1002/sim.4104.
- [99] M Akacha and JL Hutton. Modelling the rate of change in a longitudinal study with missing data, adjusting for contact attempts. *Statist.Med.*, 30:1072–1089, 2011. DOI: 10.1002/sim.4165.
- [100] P Sidebotham, B Atkins, and JL Hutton. Changes in rates of violent child deaths in England and Wales between 1974 and 2008. An analysis of national mortality data. *Arch. Dis. Ch.*, 2011. doi:10.1136/adc.2010.207647.

Cochrane library publications

- [101] AG Marson, PR Williamson, JL Hutton, HE Clough, and DW Chadwick; on behalf of the epilepsy monotherapy trialists. Carbamazepine vs valproate monotherapy for epilepsy (Cochrane review). In *The Cochrane Library*, pages 1–26. Update Software, Oxford, 2000. Issue 3.
- [102] A G Marson, Z A Kadir, J L Hutton, and D W Chadwick. Gabapentin for drug resistant partial epilepsy. In *The Cochrane Library*, pages 1–22. Update Software, Oxford, 2000. Issue 2.
- [103] R Chaisewikul, Privtera, J L Hutton, and A G Marson. Levetiracetam add-on for drug-resistant localization related (partial) epilepsy (Cochrane review). In *The Cochrane Library*, pages 1–24. Update Software, Oxford, 2001. Issue 1.
- [104] J Pereira, A G Marson, and J L Hutton. Tiagabine add-on for drug-resistant patrial epilepsy (Cochrane review). In *The Cochrane Library*, pages 1–31. Update Software, Oxford, 2002. Issue 4.
- [105] J P Leach, A G Marson, and J L Hutton. Remacemide for drug-resistant localization related epilepsy (Cochrane review). In *The Cochrane Library*, pages 1–22. Update Software, Oxford, 2002. Issue 4.

- [106] N J Jette, K Hemming, J L Hutton, and A Marson. Topiramate add-on for drug resistant partial epilepsy. *The Cochrane Database of Systematic Reviews*, 1:CD001417, 2008. 10.1002/14651858.CD001417.pub2.
- [107] K Hemming, M Maguire, JL Hutton, and A Marson. Vigabatrin for refractory partial epilepsy. *Cochrane Database of Systematic Reviews*, 3:CD007302, 2008. DOI: 10.1002/14651858.CD007302.

Edited volumes, editorials

- [108] S L Day, J L Hutton, and M J Gardner. Workshop on teaching statistics to medical undergraduates, Bristol, UK, September 1989 (guest editors). *Statist.Med.*, 9(9):1011–1120, 1990.
- [109] J L Hutton. Editorial: good statistical practice. *Health & Social Care in the Community*, 5:291–295, 1997.
- [110] J L Hutton. Medicine, ethics and knowledge. *RSS NEWS*, 24:1–2, 1997. Comment.
- [111] P J Solomon and J L Hutton. Meta-analysis, overviews and publication bias. *Stat. Meth. Med. Res.*, 10:245–250, 2001. Editorial.
- [112] G De Thé, F Buonaguro, N Charpak, JL Hutton, R Thorstensson, E Valdas, and R Zetterstrom. Ethical issues in research on control of the HIV-AIDS epidemic. *Acta Paediatrica*, pages 1125–1128, 2004.
- [113] JL Hutton. Outcome in cerebral palsy: life expectancy. *Paed. & Child Health*, 18:419–422, 2008.