

## Professor Jane Luise Hutton

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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

### **Honours:**

International Biometric Society Rob Kempton Award 2016.

Suffrage Science: Women in Maths & Computing 2016.

Royal Society Wolfson Research Merit Award, 2013-2017.

### **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.

Non-executive Director, Universities Superannuation Fund, Nov 2015- Oct 2019.

### **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 service

### 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.

Statistics and the Law section committee, 2015-

Link co-ordinator for African Institute for Mathematical Sciences, Tanzania, 2016-

### 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; Jan 2013- Dec 2019.

IBS ISI Liaison, Aug 2016 - Dec 2019.

### Editorial and advisory

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, 2003-10.

Committee of Mathematical Sciences Bologna working group, 2006-2009.

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

Member of NIHR TCC Panel, 2011-2014

Member of Core Methodology Panel, NIHR, 2011-2015

Turing Gateway to Mathematics Programme Committee, 2014-

Royal Society Newton International Fellowships Committee (Physical Science) 2016-2018.

Statistical referee, Developmental Medicine & Child Neurology, 2010-.

Review grant applications for most UK research councils, the Royal Society, the Wellcome Trust, the Leverhulme Trust, and NIHR TCC Panel.

Review grant applications for Health Research Board, Eire; Netherlands Organisation for Scientific Research; National Research Foundation, South Africa

### Expert witness

Life expectancy in cerebral palsy, traumatic brain injury, spinal cord injury:

UK, USA, Eire, Hong Kong, Australia, Canada, South Africa, over 200 cases. 1995-2016

Adverse effects of anti-epileptic drug, Vigabatrin, English case. 2007-2008.

Adverse effects of refocoxhib (Vioxx), Scottish case. 2012-2013.

General Medical Council, Fitness to Practice Panel, 2008.

## Research

My methodological research largely focuses on developing models to answer questions raised by health care colleagues, and patients. The impact of selected data and missing information in longitudinal models, survival analysis and meta-analysis, are my principal theoretical interests. 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. I have major medical collaborations are in *cerebral palsy* and *epilepsy*. Collaborations with epilepsy specialists in meta-analyses led to papers on biases due to within study selection of outcomes and sub-groups, and to joint models for pre-randomisation seizure counts and post-randomised trials.

**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 [7, 10, 13], 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 and times [13, 15, 18, 19, 21, 22, 23, 24] continues.

My applications of survival analysis in *cerebral palsy* [47, 56, 57, 58, 67, 69, 75, 76, 82] and brain tumours and *epilepsy* [39, 43, 50, 73, 92, 95] 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*.

**Missing data** occurs in many research studies: for example, people might decline to answer questions or might not be contacted. Collaboration on a trial of ankle sprains has led to models for recovery rates with skew, bounded scores, with missing data. I have collaborated in developing methods, particularly skew-normal distributions to assess the impact of missing data in survival and longitudinal studies. Skew-normal distributions have potential for unifying levels of missingness [18, 22, 29, 28, 21]. Another approach uses Chain Event Graphs, new statistical models, which we have shown provide good understanding of patterns of missing data [25, 26].

**Meta-analysis** aims to provide accurate summaries of the range of research on a topic. I work on both methodological [7, 8, 9, 11, 12, 16, 82, 20] and substantive issues [54, 60, 77, 78, 88, 86] 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* [98, 99, 100, 101, 104, 102, 103]. 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 [6]. Less technical articles have been disseminated in medical journals [83, 87].

My interest in the interplay of information, knowledge, truth and ethics led to my scholarly work on **ethics and statistics** [105, 106, 108, 112, 113, 114, 117, 116, 79, 124]. Part of the work has been supported by NHS grants [107, 110]. The Medical Research Council invited me to have a major role in writing new good practice guidelines for cluster randomized designs [120] and collaborate in evaluating animal research [85]. 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
NIHR	Exploring the role of Chain Event Graphs in modeling and managing chronic diseases	12/12	6	£28
Royal Society	Wolfson Research Merit Award	1/13	60	£100
<i>Sub-total</i>				<b>£736</b>
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 support in severe ankle sprains, & costs MW Cooke (PI), S Lamb (PI)	9/02	36	£388
NI R&D	Monitoring socio-economic inequalities in pregnancy outcome in Northern Ireland; 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, 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
AMS	Newton Advanced Fellowship; F Gumedze, (PI)	10/16	36	£88
<i>Sub-total</i>				<b>£5,367</b>
<b>Total</b>				<b>£6,003</b>

AMS: Academy of Medical Sciences; 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 from first year to masters courses, 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 and capacity building

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 given 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. I have organised short courses in Africa and Australia. I have taught seven courses at the African Institute of Mathematical Sciences.

### Supervising teaching

For 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. For three years, I was 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. I arranged relevant courses, and marked dissertations and portfolios.

### Research Supervision:

I have supervised fourteen successful PhD research students since 1998. A current research student is jointly supervised with the Behavioural Economics group of Warwick Business School.

### External examiner:

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

MSc Statistics, London School of Economics, 2004-2008; Oxford University, 2013-2017.

Undergraduate Statistics, University of Leeds, 2015-2018.

*PhD and MPhil theses:* Australia, France, South Africa, Sudan, United Kingdom

## Administration

### Contributions to the University of Warwick

- Senior tutor, Statistics, 2014-2016.
- Widening participation co-ordinator with Liskeard Community School, 2014-16.
- PhD statistics admissions tutor, 2009-2012.
- Director, Mathematics & Statistics post-graduate certificate in professional practice 2009-2012.
- 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

### Methodological articles

- [1] J L Hutton. Non-negative time series models for dry river flow. *J.Appl.Prob*, 27:171–182, 1990.
- [2] J L Hutton and R G Owens. Bayesian sample size calculations and prior beliefs about child sexual abuse. *The Statistician*, 42:399–404, 1993.
- [3] 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.
- [4] 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.
- [5] 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.
- [6] J L Hutton. Number needed to treat: properties and problems. *J.R.Statist.Soc. A*, 163:403–419, 2000.
- [7] J L Hutton and P R Williamson. Bias in meta-analysis with variable selection within studies. *Appl. Statist*, 49:359–370, 2000.
- [8] 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.

- [9] 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.
- [10] 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.
- [11] 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.
- [12] P R Williamson, C Tudur Smith, J L Hutton, and A G Marson. Aggregate data meta-analysis with time-to-event outcomes. *Statist. Med*, 21:3337–3351, 2002.
- [13] 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.
- [14] 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.
- [15] 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.
- [16] K Hemming, J L 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.
- [17] PK Kimani, N Stallard, and J L Hutton. Dose selection in seamless phase (II/III) clinical trials based on efficacy and safety. *Statist. Med*, 28:917–936, 2009.
- [18] K Hemming and J L Hutton. Bayesian sensitivity models for missing covariates in the analysis of survival data. *J Eval. Clin. Pract.*, 18:238–246, 2012. Epub 2010 Nov 30.
- [19] 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. Gopal Kanji prize for Best Paper 2010.
- [20] K Hemming, J L Hutton, MG Maguire, and AG Marson. Meta-regression with partial information on summary trial or patient characteristics. *Statist. Med*, 29:1312–1324, 2010. DOI: 10.1002/sim.3848.
- [21] J L Hutton and E Stanghellini. Modelling bounded health scores with censored skew-normal distributions. *Statist. Med*, 31:368–376, 2011. DOI: 10.1002/sim.4104.
- [22] M Akacha and J L 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.
- [23] PK Kimani, E Glimm, W Maurer, J L Hutton, and N Stallard. Practical guidelines for adaptive seamless phase ii/iii clinical trials that use Bayesian methods. *Statist. Med*, 2012. doi: 10.1002/sim.5326.
- [24] JK Rogers and J L Hutton. Joint modelling of pre-randomisation event counts and multiple postrandomisation survival times with cure rates: application to data for early epilepsy and single seizures. *J Appl. Stats*, 3:546–562, 2012.

- [25] LM Barclay, J L Hutton, and JQ Smith. Refining a Bayesian Network using a Chain Event Graph. *Int. J. Approx. Reason.*, 54:13001309, 2013.
- [26] LM Barclay, J L Hutton, and JQ Smith. Chain event graphs for informed missingness. *Bayesian Analysis*, 9:53–76, 2014.
- [27] J L Hutton and EO Ogundimu. On the extended two-parameter generalized skew-normal distribution. *Stat. Prob. Letters*, 100:142–148, 2015.
- [28] EO Ogundimu and J L Hutton. A unified approach to multilevel sample selection models. *Com. Stat. Theory Methods*, 45:2592–2611, 2016.
- [29] EO Ogundimu and J L Hutton. A sample selection model with skew-normal distribution. *SJS*, 43:172–190, 2016. Epub 2015.7.1.
- [30] FJ Rubio, EO Ogundimu, and J L Hutton. On modelling asymmetric data using twopiece sinh-arcsinh distributions. *Brazilian J. Prob.Stats.*, 30:485–501, 2016.

### Substantive articles

- [31] 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.
- [32] 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.
- [33] 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.
- [34] 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.
- [35] 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.
- [36] 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.
- [37] 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.
- [38] B T Parys, B T Haylen, J L Hutton, and K F Parsons. Neurophysiological reflex arc abnormality after total hysterectomy. *Int Uroggyne J*, 1:200–205, 1990.
- [39] 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.
- [40] 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.



- [41] B T Parys and J L Hutton. Fifteen-year experience of carcinoma of the scrotum. *Br.J. Urol.*, 68:414–417, 1991.
- [42] 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.
- [43] 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.
- [44] 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.
- [45] 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 Pract*, 43:61–64, 1993.
- [46] 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.
- [47] J L Hutton, T Cooke, and P O D Pharoah. Life expectancy in children with cerebral palsy. *Brit. Med. J.*, 309:431–435, 1994.
- [48] 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.
- [49] 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.
- [50] 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.
- [51] CJ Green, IT Campbell, P McClelland, J L 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.
- [52] 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.
- [53] 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.
- [54] 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.
- [55] 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.
- [56] 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.

- [57] 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.
- [58] 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.
- [59] 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.
- [60] 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.
- [61] 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.
- [62] 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.
- [63] 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.
- [64] SN Jarvis, SV Glinianaia, MG Torrioli, MJ Platt, M Miceli, PS Jouk, A Johnson, J L 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.
- [65] 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. *Clin and Exp Derm.*, 29:154–155, 2003.
- [66] M Topp, L D Huusom, J Langhoff-Roos, C Delhumeau, J L Hutton, and H Dolk. Multiple birth and cerebral palsy in Europe: a multicenter study. *Acta Obstet Gynecol Scand*, 83:548–553, 2004.
- [67] K Hemming, J L Hutton, A Colver, and MJ Platt. Regional variation in survival of people with cerebral palsy in the United Kingdom. *Pediatrics*, 116:1383–1390, 2005.
- [68] K Hemming, J L 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.
- [69] K Hemming, J L Hutton, and POD Pharoah. Long term survival for a cohort of adults with cerebral palsy. *Dev. Med. & Child. Neur.*, 48:90–95, 2006.
- [70] P O D Pharoah and J L Hutton. Life expectancy in severe cerebral palsy. *Arch. Dis. Ch.*, 91:254–258, 2006. doi:0.1136/adc.2005.075002.
- [71] RA Nakash, J L 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.
- [72] J L Hutton. Cerebral palsy life expectancy. *Clin. Perinatol*, 33:545–555, 2006.
- [73] BJ Cowling, JEH Shaw, J L 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.

- [74] RA Nakash, J L 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.
- [75] K Hemming, J L Hutton, S Bonellie, and J Kurinczuk. Intrauterine growth and survival in cerebral palsy. *Arch Dis Child Fetal Neonatal Ed*, 93:F121–F126, 2008. doi:10.1136/adc.2007.121129.
- [76] K Hemming, A Colver, J L 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.
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