

## 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.

Commendation, John Maddox Sense about Science, 2019.

Royal Statistical Society Mardia Prize 2023: Statistics and the Law interdisciplinary workshops

### **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, Chartered Statistician;

## National and international service

### Royal Society

Dorothy Hodgkin Fellowships panel, 2020 - 2025.

Joint organiser: Hooke Discussion meeting: *How should pension liabilities be valued?*, March 2019.

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

### Royal Statistical Society

Vice-president, 2001 - 2003.

Council member, 1997 - 2002.

Statistics and the Law section committee, Chair 2019 - 2021, 2015 - 2018.

African Institute for Mathematical Sciences support group, 2016 -

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

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

Research section committee, 1996 - 1999.

Local groups: committee member, treasurer, secretary, 1989 - 1998, 2002, 2022-.

### International Biometric Society

IBS – ISI Liaison, Aug 2016 - Dec 2019.

Member of Education Committee, Jan 2004 - Dec 2005; Jan 2013 - Dec 2019.

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.

### Expert witness

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

UK, Eire, Hong Kong, Australia, Canada, South Africa, over 500 cases. 1995 - 2024

Cardiorientis AG and IQVIA, England, (Claim No: CL-2019-000064) 2021

Pinacle metal-on-metal hip implants, England, Neutral Citation Number: [2018] EWHC 1208 (QB).

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

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

General Medical Council, Fitness to Practice Panel, 2008.

### Editorial, advisory

Member of Editorial Board, J. Pediatric Rehabilitation Medicine, 2022 -

Newton Gateway to Mathematics Programme Committee, 2014 -

Member of Core Methodology Panel, National Institute Health Research, 2011 - 2015

Member of National Institute Health Research TCC Panel, 2011 - 2014

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

Medical Research Council (MRC) CPBAR working group on experimental design, 2003 - 2010.

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

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

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

National grant application review for most UK research councils, the Royal Society, the Wellcome Trust, the Leverhulme Trust, and NIHR TCC Panel.

International grant application review for Health Research Board, Eire; Netherlands Organisation for Scientific Research; National Research Foundation, South Africa

## Research

Transparent decision-making is widely appreciated. My methodological research develops 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.

My collaborative research has had wide-ranging international impact in health care [135] and society through expert witness reports [132]. In 2024 I am running four workshops on statistics and the law, and I have contributed to guides for lawyers [133, 134].

**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* [103, 104, 105, 106, 107, 108, 109]. 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].

I am interested in the interplay of information, knowledge, truth, **ethics and statistics** [110, 111, 117, 118, 119, 122, 121, 79, 129, 130]. The work was partly supported by NHS grants [112, 115]. The Medical Research Council invited me to take a major role in writing new good practice guidelines for cluster randomized designs [125] and collaborate in evaluating animal research [85]. I have had several international invitations to address ethics and statistics.

**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; JB 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
DfT	Driver 2020		48	£ £
<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. I have experience of teaching in several countries, and to students of many nations. My teaching ability is recognised nationally and internationally. Feedback on my teaching of statistics from first year to masters courses, and service courses has consistently been very good.

### **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. I have given several seminars to lawyers, and have written guidelines for refereeing and study design. I was 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 13 courses at the African Institute of Mathematical Sciences, in Cameroon, Ghana, South Africa, Tanzania, and co-organised a workshop at AIMS Rwanda on 'African Data Science Degrees: Design & implementation'.

### **Supervising teaching**

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.

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.

### **Research Supervision:**

I have supervised sixteen successful PhD research students since 1998.

### **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

## 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.*, 54:1300–1309, 2013.
- [26] LM Barclay, J L Hutton, and JQ Smith. Chain event graphs for informed missingness. *Bayesian Analysis*, 9:53–76, 2014.
- [27] EO Ogundimu and JL Hutton. 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 two-piece 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 Urogynae 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 Sang.*, 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 Prac*, 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. *J Eval Clinical Practice*, 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.
- [77] M Maguire, K Hemming, AG Marson, and J L Hutton. Reporting and analysis of open-label extension studies of anti-epileptic drugs. *Epilepsy Research*, 81:24–29, 2008.
- [78] M Maguire, K Hemming, AG Marson, and J L Hutton. Overwhelming heterogeneity in systematic reviews of observational anti-epileptic studies. *Epilepsy Research*, 80:201–212, 2008.
- [79] JC Hughes, J Newby, SJ Louw, G Campbell, and J L Hutton. Ethical issues and tagging in dementia: a survey. *J Ethics Mental Health*, 3:1–6, 2008. Available via www.jemh.ca.

- [80] SE Lamb, J L Marsh, J L 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.
- [81] MW Cooke, J L Marsh, M Clark, R Nakash, RM Jarvis, J L 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.
- [82] 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.
- [83] 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.
- [84] K Hemming, J L 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.
- [85] C Kilkenny, N Parsons, E Kadyszewski, MFW Festing, IC Cuthill, D Fry, J L Hutton, and DG Altman. Survey of the quality of experimental design, statistical analysis and reporting of research using animals. *PLOS one*, 4:1–11, 2009.
- [86] Carol Hawley and J L 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/>.
- [87] 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.
- [88] M Maguire, K Hemming, JM Wild, J L Hutton, and A Marson. Prevalence of visual field loss following exposure to vigabatrin therapy: A systematic review. *Epilepsia*, 51:2423–2431, 2010.
- [89] P Sidebotham, B Atkins, and J L 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.*, 97:193–199, 2011. doi:10.1136/adc.2010.207647.
- [90] K Hemming, S Bonellie, and J L Hutton. Fetal growth and birth-weight standards as screening tools: methods for evaluating performance. *B.J.Obs.Gyne.*, 118:1477–1483, 2011.
- [91] SM Bird and J L Hutton. Statistician expert-witnesses in agreement on relative hazards. *Clin Risk*, 18:58–62, 2012. doi:10.1258/cr.2012.011056.
- [92] JK Rogers, J L Hutton, AG Marson, and DW Chadwick. Assessing the risk of subsequent tonic-clonic seizures in patients with a history of simple or complex partial seizures. *J of Neurology, Neurosurgery and Psych*, 83:803–809, 2012.
- [93] J L Hutton, JHW Watt, and E Wiredu. Letter commenting on “survival after short- or long-term ventilation after acute spinal cord injury: a single-centre 25-year retrospective study” (*Spinal Cord* 2011, 49:404-410). *Spinal Cord*, 2012. doi.org/10.1038/sc.2012.106.

- [94] A Heinze, MC Elze, S Klöss, O Ciocarlie, C Koenigs, S Betz, Melanie B, R Esser, T Klingebiel, M Serban, J L Hutton, and U Köhl. Age-matched dendritic cell subpopulations reference values in childhood. *Scandinavian J Immunology*, 77:213–220, 2013.
- [95] GK Mbizvo, P Dixon, J L Hutton, and AG Marson. The adverse effects profile of levetiracetam in epilepsy: a more detailed look. *J Neurol. Neurophys.*, 2013.
- [96] MC Elze, O Ciocarlie, A Heinze, S Klöss, T Klingebiel, M Serban, U Köhl, and J L Hutton. Dendritic cell reconstitution is associated with relapse-free survival and acute gvhd severity in children after allogeneic stem cell transplantation. *Bone Marrow Transp*, 50:266–73, 2014. Epub 2014 Nov 10.
- [97] MC Elze, H Gimeno, K Tustin, L Baker, D E Lumsden, J L Hutton, and J-P Lin. Burke-Fahn-Marsden dystonia severity, Gross-Motor, Manual-Ability and Communication-Function Classification Scales in childhood hyperkinetic movement disorders including CP: a Rosetta Stone study. *Dev. Med. & Child. Neur.*, 58:145–153, 2015. Epub 2015.11.20.
- [98] JL Hutton. Expert evidence: civil law, epidemiology and data quality. *Law, Probability And Risk*, 17:101–110, 2018.
- [99] R Gadsby, E Trevelyan, D Ivanova, JL Hutton, and S Johnson. Nausea and vomiting in pregnancy (NVP) is not just ‘morning sickness’: Data from a prospective cohort study. *B. J. Gen. Prac.*, 70(697):e534–e539, 2020.
- [100] JL Hutton. Forensic statistics: How to estimate life expectancy after injury. In A Pollice, N Salvati, and FS Spagnolo, editors, *Book of short papers - SIS 2020*, pages 564–569. Pearson, www.pearson.com, 2020. ISBN 9788891910776.
- [101] LJ Bonnett, JL Hutton, and AG Marson. Modelling seizure rates rather than time to an event within clinical trials of antiepileptic drugs. *BMC Medical Research Methodology*, 20, 2020.
- [102] R Gadsby, D Ivanova, E Trevelyan, JL Hutton, and S Johnson. The onset of nausea and vomiting of pregnancy: a prospective cohort study. *BMC Preg & Childbirth*, 10:1–7, 2021.

### **Cochrane library publications**

- [103] AG Marson, PR Williamson, J L Hutton, HE Clough, and DW Chadwick. Carbamazepine vs valproate monotherapy for epilepsy. *Cochrane Database Syst Rev*, Issue 3:CD001030, 2000.
- [104] J P Leach, A G Marson, and J L Hutton. Remacemide for drug-resistant localization related epilepsy. *Cochrane Database Syst Rev*, Issue 4:CD001900, 2008.
- [105] K Hemming, M Maguire, J L Hutton, and A Marson. Vigabatrin for refractory partial epilepsy. *Cochrane Database Syst Rev*, Issue 3:CD007302, 2008.
- [106] J Pulman, J L Hutton, and A G Marson. Tiagabine add-on for drug-resistant patrial epilepsy. *Cochrane Database Syst Rev*, Issue 2:CD001908, 2014.
- [107] R Bresnahan, J Hounsome, N J Jette, J L Hutton, and A Marson. Topiramate add-on for drug resistant focal epilepsy. *Cochrane Database Syst Rev*, 10:CD001417, 2019.
- [108] GK Mbizvo, B Chandrasekar, SJ Nevitt, P Dixon, JL Hutton, and AG Marson. Levetiracetam add-on for drug-resistant focal epilepsy (update). *Cochrane Database Syst Rev*, Issue 6:1–54, 2020.

- [109] Panebianco M, S Al-Bachari, J L Hutton, and A G Marson. Gabapentin add-on treatment for drug-resistant focal epilepsy. *Cochrane Database Syst Rev.*, Jan 12(Issue 1):CD001415, 2021.

### Philosophical articles

- [110] J L Hutton. Statistics is essential for professional ethics. *J.Appl.Phil.*, 12:253–261, 1995.
- [111] J L Hutton. The ethics of randomised controlled trials: A matter of statistical belief. *Health Care Anal.*, 4:95–102, 1996.
- [112] 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.
- [113] 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.
- [114] 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.
- [115] 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.
- [116] 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.
- [117] 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.
- [118] J L Hutton and R E Ashcroft. Some popular versions of uninformed consent. *Health Care Anal.*, 8:41–52, 2000.
- [119] 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.
- [120] 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.
- [121] 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.
- [122] J L Hutton. Are distinctive ethical principles required for cluster randomised controlled trials? *Statist. Med.*, 20:473–488, 2001.
- [123] 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.

- [124] 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.
- [125] MRC clinical trial series. *Cluster randomised trials: Methodological and ethical considerations*. Medical Research Council, London, 2002.
- [126] G De Thé, F Buonaguro, N Charpak, J L Hutton, R Thorstensson, E Valdas, and R Zetterstrom. Ethical issues in research on control of the HIV-AIDS epidemic: report from a workshop of the world federation of scientists, Erice, Sicily, Italy, 22-24 August 2003. *Acta Paediatr.*, pages 1125–1128, 2004.
- [127] 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.
- [128] 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.
- [129] 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*, 3:52, 2009. <http://www.implementationscience.com/content/3/1/52>.
- [130] J L Hutton. *Medical ethics and statistics*, volume ©, pages 1–15. John Wiley & Sons, Ltd, London, 2017. Update based on original article by Jane Hutton, Wiley StatsRef: Statistics Reference Online ©2014 John Wiley & Sons, Ltd.

### Chapters, guides, technical reports

- [131] J L Hutton. Outcome in cerebral palsy: life expectancy. *Paed. & Child Health*, 18:419–422, 2008.
- [132] J L Hutton. Life expectancy with cerebral palsy and other neurological injuries. In PJ Aston, AJ Mulholland, and KMM Tant, editors, *UK Success Stories in Industrial Mathematics*, pages 237–241. Springer, Switzerland, 2016.
- [133] The Council of the Inns of Court (COIC) and the Royal Statistical Society (RSS). Statistics and probability for advocates: Understanding the use of statistical evidence in courts and tribunals. <https://www.icca.ac.uk/wp-content/uploads/2019/11/RSS-Guide-to-Statistics-and-Probability-for-Advocates.pdf>, 2017. Member of writing group.
- [134] A Beiderman, C Champod, JL Hutton, G Jackson, Lord Kitchin, T Neocleous, D Spiegelhalter, S Willis, and A Wilson. *The use of statistics in legal proceedings: a primer for courts*. The Royal Society and The Royal Society of Edinburgh, London and Edinburgh, 2020.
- [135] P R Williamson and J L Hutton. Minimising bias and increasing relevance in clinical trials: basis for the international standard. In PJ Aston, editor, *More UK Success Stories in Industrial Mathematics*. Springer Cham, Switzerland, 2024. eBook ISBN 978-3-031-48683-8.
- [136] J Pina-Sánchez, JL Hutton, S Kamperis, A Smith, and W T Lee. Disparities in criminal justice decision-making. Technical report, Mathematics in Industry Reports (MIIR), 2024.

**Editorials and discussions**

- [137] J L Hutton. Discussion of ‘methodological and ethical issues in clinical trials’. *Statistics in Medicine*, 12:1524–1525, 1993.
- [138] J L Hutton. Discussion of Balding D J & Donnelly P ‘Inference in forensic identification’. *Journal of the Royal Statistical Society, Series A*, 158:45, 1995.
- [139] J L Hutton. Discussion of Walley P ‘Inferences from Multinomial Data: Learning from a bag of marbles’. *Journal of the Royal Statistical Society, Series B*, 58:46, 1996.
- [140] J L Hutton. Discussion of Hand, D J ‘Statistics and the theory of measurement’. *Journal of the Royal Statistical Society, Series A*, 159:475–475, 1996.
- [141] J L Hutton. Discussion of Hand, DJ, Bailey, RA et al ‘Statistics and mathematics’. *The Statistician*, 47:281, 1998.
- [142] J L Hutton. Editorial: good statistical practice. *Health & Social Care in the Community*, 5:291–295, 1997.
- [143] P J Solomon and J L Hutton. Meta-analysis, overviews and publication bias. *Stat. Meth. Med. Res.*, 10:245–250, 2001. Editorial.
- [144] D Strauss, R Shavelle, J L Hutton, and A Colver. Life expectancy in cerebral palsy. *NeuroRehabilitation*, 18:261–70, 2003. Letter.
- [145] J L Hutton. Invited discussion of R Taplin ‘Enhancing statistical education by using role-plays of consultations’. *Journal of the Royal Statistical Society, Series A*, 170:290, 2007.
- [146] J L Hutton. Discussion of D Zeng and D Lin ‘Maximum likelihood estimation in semiparametric regression models with censored data’. *Journal of the Royal Statistical Society, Series B*, 69:547, 2007.
- [147] J L Hutton. Weighing privacy against effective epidemiology. *Dev. Med. & Child. Neur.*, 57:595–596, 2015.
- [148] J L Hutton. Discussion: What does ‘propensity’ add? *Statist. Sci.*, 31:549–551, 2016.
- [149] J L Hutton. Discussion of ‘Signs and sizes: understanding and replicating statistical findings’: papers by Rice et al. and Held. *Journal of the Royal Statistical Society, Series A*, 2020.
- [150] Jane L. Hutton. Celebrating the Life and Work of Sir David Cox. *Harvard Data Science Review*, 5(2), 2023. <https://hdsr.mitpress.mit.edu/pub/13s3z944>.
- [151] J L Hutton. Discussion of ‘Experimental evaluation of algorithm-assisted human decision-making: application to pretrial public safety assessment’ by Imai et al. *Journal of the Royal Statistical Society, Series A*, 186(2):205–206, 2023.