Preface

The Medical Statistics Group (MSG) has now been functioning as a separate academic group for over a year, with the statisticians within the group being co-located on the third floor of Regent Court. This is the second year that we have produced an annual report separately from the other Sections of ScHARR.

We have already seen a number of advantages of being a separate group: the main one is that we have been able to consolidate our teaching. Stephen Walters coordinated the new module HAR6035 ‘Statistics for Consumers’ in the first semester. This is a post-graduate course mainly taken by the students on the MPH but also available to students on other taught post graduate courses in ScHARR and PhD students as part of their research training programme (RTP). Steven Julious will do something similar with HAR6036 ‘Statistics for Doers’ in the second semester. This enables us to streamline and rationalise our courses, rather than doing ad hoc service courses at the behest of other groups.


We were also pleased that the Clinical Trials Research Unit has finally got off the ground; the MSG provided advice on the design of a number of trials which have subsequently been funded. We hope that there will be funding for a statistician dedicated to the Trials Unit soon.

Three highlights of the year: the International Conference on Teaching Statistics in Salvador, Brazil in June where Mike and Jenny were invited speakers; the International Society for Clinical Biostatistics Conference in Geneva in August where Mike and Steven gave a pre-conference course on Sample Size calculations for Normal data and George Jones being promoted to Senior Lecturer.

During the year Mike Campbell was appointed Head of the HSR section of ScHARR and Stephen Walters has taken over as Head of the Medical Statistics Group. Stephen has been appointed secretary of the Medical Section of the Royal Statistical Society.

As can be seen in the report, the five core members of the MSG teach and examine across a wide range of undergraduate and post graduate courses for both ScHARR and for the Faculty of Medicine.

Stephen, Jenny and Mike were successfully in winning a University sponsored PhD studentship to investigate the effect of clustering by therapists in patients recruited to individually randomised controlled trials. Lucy Radford took up the studentship in September 2006.
We have a strong list of peer reviewed publications with 25 joint-authored papers in 2006 (including a paper in the New England Journal of Medicine) and a further 12 non-refereed papers or letters and one book. We have also been commissioned to write several books on medical statistics.

MJC January 2007
### The Medical Statistics group

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
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<tbody>
<tr>
<td>Mike Campbell (MJC)</td>
<td>Professor of Medical Statistics</td>
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<tr>
<td>Georgina Jones (GL)</td>
<td>Senior Lecturer in Social Sciences</td>
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<tr>
<td>Steven Julious (SAJ)</td>
<td>Senior Lecturer in Medical Statistics</td>
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<td>Stephen Walters (SJW)</td>
<td>Senior Lecturer in Medical Statistics</td>
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<td>Jenny Freeman (JF)</td>
<td>Lecturer in Medical Statistics</td>
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<td>Khadija Rantell (KR)</td>
<td>Research Fellow</td>
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<td>Spencer Boyle (SB)</td>
<td>PhD Student</td>
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<td>Adriana Ismail (AI)</td>
<td>PhD Student</td>
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<td>Lucy Radford (LR)</td>
<td>PhD Student</td>
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<tr>
<td>(David Machin)</td>
<td>Emeritus Professor</td>
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<td>Jon Nichol (JPN)</td>
<td>Professor of HSR</td>
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<td>Alicia O’Cathain (AOC)</td>
<td>Senior Research Fellow</td>
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<td>Tracy Young (TY)</td>
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### Other Statisticians in ScHARR

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<td>Lecturer</td>
<td>HEDS</td>
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Teaching 2006 by MSG

**Undergraduate**

MBChB (MJC, JF, SAJ, SJW, GLJ)
Intercalated BMedSci (Medical School) (MJC, SAJ, SJW, GLJ)
BMedSci (ScHARR) (JF, SJW)

**Postgraduate**

MSc in HSR & TA (SJW SAJ)
Statistics for Consumers (HAR6035) (MJC, JF, SJW)
MSc Genetic Epidemiology (MJC)
Research Training Programme for PhDs (SAJ)
MSc in Medical and Health Sciences - Generic Research Training Programme (MJC, SJW)
MSc Health and Social Care (distance learning) (including RTP and MSc in Psychological Research Students (GLJ)

Specialist Registrars short course (JF)
MSc Renal Medicine (JF)
MRCPsych Part II Social Science (GLJ)

Trent RDSU New Researchers Training Programme (SJW)
Trent RDSU Short courses (JF, SJW)
Trent RDSU Statistics Clinics (MJC, JF, SAJ, SJW)

**External Courses**

Cluster randomised Trials : afternoon course MSc Med Stats (Leicester) (MJC)
‘Cluster randomised trials’. One day Erasmus Winter Course Rotterdam (MJC)
Pre-conference course ‘Sample size calculations for Normal Data’ ISCB Geneva (MJC SAJ)
Medical Statistics Group peer-reviewed publications 2006


Hassan K., Poornachandra C., Walters S., Ali A. Short-term follow-up of ceramic press fit first metatarso-phalangeal joint arthroplasty *The Foot*, 2006; 16(3):142-144


Other publications (non refereed)

Books

Invited Conference Talks and seminars
MJ C
‘Complex interventions, cluster trials, modelling and complexity’ Royal Statistical Society Primary Care Working Group, London, March
‘30 years of Medical Statistics: what has changed and what hasn’t’. After dinner speech, Teachers of Medical Statistics Burwalls, Bristol April
‘Complex interventions, cluster trials, modelling and complexity’ Biometrics Society German Region Bochum March
‘Appraising medicines for the UK National Institute of Clinical Excellence’ Department of Public Health, Munich, May
‘Robust standard errors’ White Rose Statisticians meeting Leeds June
‘Complex interventions, cluster trials, modelling and complexity’ MRC meeting Goodenough College London, May:
‘Complex interventions, cluster trials, modelling and complexity’ Medical School Nottingham Oct
‘A statistician on a NICE Appraisals Committee: a personal view’ Bradford Hill Seminar series, Cambridge Nov

**JVF**

**GLJ**
British Adolescent & Paediatric Gynaecology Conference (London, Feb 2006)
PCOS UK Conference (Manchester, September 2006)
South, British PCOS Conference (London, Feb 2006)
North British PCOS Conference (Glasgow, August 2006)
British Gynaecology Endoscopy Conference (May 2006).

**Contributed talks and posters**
Choudhary P, K Lonnen, C Emery, **J Freeman,** K MacLeod, S Heller. Interstitial glucose is higher than plasma glucose at hypoglycaemia in elderly subjects with and without type 2 diabetes American Diabetic Association, 2006. Poster
Choudhary P, Davies C, **Freeman J,** Emery C, Heller S. Determining the ability of CGMS to detect clinically relevant hypoglycaemia. *American Diabetic Association 2006 Poster*

**Freeman J,** S Heller, P Choudhary, C Emery Differences in hypoglycaemia rates in Type I and Type II diabetes: implications for policymakers.. *50th Annual Scientific Meeting for the Society for Social Medicine, Leeds, Sept 2006.*
**Freeman J,** J Munro, P Dorling, T Oxley. Exploring the impact of caseload midwifery on outcomes of labour *Poster RCM conference 2006.*
Rantell K, Parry GJ, Jones S, Stevens K, Colwell B, McCabe CJ Relationship between socioeconomic status (SES) and health related quality of life measures (HRQOL): A report of a national study of survivors of paediatric intensive care unit in the UK. *Poster Society of Social Medicine 50th Annual Scientific Meeting, Leeds, 2006*
**PhD Students**
Adriana Ismail (MJC and GLJ)
Spencer Boyle (full-time): supervised by SJW and GJ
Lucy Radford (full-time): supervised by SJW and JVF
Elton Chanakira (full-time): supervised by Liddy Goyder (Public Health), JVF & Alicia O’Cathain
Nicola Clibbens (part-time university staff candidate): supervised by Wendy Baird (Public Health) and SJW
Tom Locker (part-time university staff candidate): supervised by Sue Mason (HSR) and SJW
Khadija Rerhou (part-time university staff candidate): supervised by MJC
Chirk Jeng Ng: supervised by Nigel Mathers and MJC

**MSc Students**
Nicola Wing, MPH (SJW)
Clare Bale, MPH (JVF)
Disan Kiguli, MSc in Probability and Statistics (SJW)
Maha Ellider, Trent RDSU NRTP (SJW)
Jane Senior MPH part time (MJC)

**Internal examining**
Internal PhD Examiner for Claire Hibbert (SJW)
Internal PhD Examiner for Maria Burton (GLJ)

**External examining**
PhD Examiner University of Manchester (resit) (MJC)
PhD Examiner University of London (MRC Clinical Trials) (MJC)
PhD Examiner, University of Girona, Spain (MJC)

External adviser: MSc Medical Statistics. University of Hong Kong (MJC)
External Positions

Mike Campbell continues to be an Editor in Chief for Statistics in Medicine. He is a member of Appraisal Committee B for the National Institute for Health and Clinical Excellence. He is a member of Panel C12 (Professions Allied to Medicine) for the Research Assessment Exercise 2008. He continues on the Education Committee of the International Society for Clinical Biostatistics (ISCB).

He chairs the DMEC for ELSA (Trial of Early Stage Labour) University of York and is a member of DMECs for THREAD (University of Southampton,) FINE, University of Manchester and the FACS trial (university of Nottingham). He is on the TSG for VENUS (Trial of maggots for venous ulcers), University of York and for VULCAN (Anti-microbial treatment for venous ulcers) University of Sheffield. He is on the Academic Advisory Group to the Sheffield Health and Social Care Consortium.

Steven Julious continues as Editor in Chief of Pharmaceutical Statistics. He also sits on the Scientific Review Committee for the Sheffield Research Consortium and has been nominated to become a Fellow of the Royal Institute of Public Health.

Stephen Walters is the Examiner in Medical Statistics for the Graduate Diploma of the Royal Statistical Society. He is secretary to the Medical Section for the Royal Statistical Society. Stephen is an independent member of the ELSA trial steering committee, University of York; and on the DSM committees of three other randomised controlled trials: CHHIPS study, University of Leicester; COSSACS study University of Leicester; the SINS study University of Nottingham. He became chair of the ScHARR ethics committee. He is also a member of the International Advisory Board for the journal of Quality of Life Research; statistical advisor to the editorial board of the journal of Sexual and Relationship Therapy and a member of the Editorial Board for the journal of Health and Quality of Life Outcomes.

Jenny Freeman is a member of the Sheffield Health and Social Care Consortium Scientific Review Panel and in 2008 will take over as the Examiner in Medical Statistics for the Graduate Diploma of the Royal Statistical Society.

Georgina Jones continues to be on the Executive Board for the national charity PCOS UK. She is on the Editorial Board for the journal of Health and Quality of Life Outcomes. She is an expert member of the South Sheffield Ethics Committee.

Refereeing

Both Mike Campbell and Stephen Walters are reviewers for the BMJ, whilst Jenny Freeman is a statistical referee for the BJGP and the Journal of Health and Social Care. Stephen has acted as a referee for the following: Quality of Life Research; Statistics in Medicine; Pharmacoeconomics; Health and Quality
Research Awards and Grants (both new and ongoing)

**J. Freeman:** Senate award for excellence in teaching. June 2005. Collaborative award with Kevin Smith (Public Health), David Staniforth (LDMU) & Steve Collier (LDMU) Total £3,000 for Dept to be spent on teaching resources and £3,000 between applicants.

**SJ Walters** A randomised 2x2 trial of community versus hospital rehabilitation followed by telephone or conventional follow up; impact on quality of life, exercise capacity and use of healthcare resources. £400,000. 48 months 2002-2006 Funding body: NHS R & D HTA PI: Dr R. Lawson.

**SJ Walters** Comparison of review methods for evaluating quality and safety in health care £472,000 36 months 2004-2007. Funding body: Department of Health PI : Prof. A. Hutchinson

**SJ Walters** Clustering by health professionals in individually randomised trials (University Project Studentship); £48,000; 36 months 2006-2009; Funding body: University of Sheffield. PI: Dr Stephen Walters.

**MJ Campbell** Does self monitoring of blood glucose as opposed to urinalysis provide additional benefit to newly diagnosed individuals with Type 2 diabetes receiving structured education? 2006-7. Funding Body : Diabetes UK £12,750 PI Simon Heller

**GL Jones (PI).** Treatment for endometrial & vulval cancer: Measuring outcome from the patients perspective. 27 months Feb 2007 – May 2009. Funding body Weston Park Cancer Hospital, £45,072

**GL Jones (PI).** A pilot study to develop a new chronic pelvic pain questionnaire Pfizer. £10,000. 24 months

**GL Jones** White Rose Capacity Building Grant. PI (Professor Jane Davidson), £40,000. 6 months

**GL Jones (PI).** Understanding why women present late for antenatal booking: a qualitative analysis Sheffield Health and Social Care Research Consortium £36,484

**GL Jones (PI)** The development of two postnatal health questionnaires: one for mothers and one for their partners. Sheffield Health and Social Care Research Consortium. £79,000 (March 2003 – July 2007.)
Future Plans

Our big event is in April when for the first time ever the Teachers of Medical Statistics Conference (usually held at Burwalls Bristol) will come to Sheffield organised by Jenny Freeman.

In research we will continue to investigate practical applications of the latest theoretical research.

In teaching we are collaborating with the Department of Probability and Statistics to deliver an MSc in Medical Statistics, as a offshoot of their MSc in Probability and Statistics by distance learning and face-to-face.

We will continue to provide statistical support through ScHARR and explore the possibility of expanding.

We will continue to support the CTRU and hope to fund a statistician to service it.

JF, SJW and MJC are writing a book on ‘How to display data’ for Blackwells. MJC and SAJ are revising ‘Statistical Tables for the Design of Clinical Studies’ for Blackwell with Say-Beng Tan and Sze Huey Tan (Singapore) and David Machin.

In addition SAJ is writing two books: i) Clinical Trial Design for Chapman and Hall. ii) Early Phase Trials (with Say-Beng Tan and David Machin) for Wiley. He has been commissioned to write a series of research articles for the journal Public Health.

GLJ has submitted a book proposal with Mr Stephen Radley on quality of life measurement in gynaecology.