

Day 1 (Tuesday):

8:15 – 9:15 Registration Open

Conference opening: Assembly Room

09:15 – 09:30 Opening remarks – Kerry Gordon (PSI Chair & Quintiles)

09:30 – 11:00 **Plenary 1 – Novel Study Designs.** Chair: Kerry Gordon (PSI Chair & Quintiles)

George-Davey Smith (University of Bristol) – Identifying modifiable causes of disease in observational studies: can Mendelian randomisation help?

Mike Smith (Pfizer) – Adaptive designs for proof of concept and dose finding trials

11:00 – 11:30 Coffee

Plenary 1 Cont. – Novel Study Designs. Chair: Kerry Gordon (PSI Chair & Quintiles)

Armin Koch (BfARM) – Regulatory considerations on the role of adaptive designs in Phase III clinical trials

Sheila Bird (MRC), Sharon Hutchinson (Health Protection Scotland) – Novel record linkage designs can illuminate public health: the best laid plans...

13:00 – 14:15 Lunch

1a (Assembly Room)

PSI Annual General Meeting

1b Contributed papers (Ferrier Hall)

Epidemiology/Public Health

Frank Dunstan (Uni. Cardiff)
- *The use of spatial smoothing models in understanding the epidemiology of campylobacter infections*

P W Gething (Uni. Southampton)
- *Optimising the utility of national malaria data for health system planning in Kenya using spatiotemporal analysis*

Marc Saez (Uni. Girona)
- *Comparison of Hurdle and ZIP models in the solution of the excess zero problem in the relationship between cancer mortality and material deprivation by census tracts*

Laurence Moore (Uni. Cardiff)
- *Cluster randomised trial of a schools-based, peer-led, anti-smoking intervention*

1c Contributed papers (Room D)

Primary Health Care

Caoimhe O’Sullivan (UCL Hospitals NHS Trust)
- *Estimating variability in general practice outcomes and identifying factors that explain variability*

Sandra Eldridge (QMUL)
- *What’s wrong with cluster randomised trials in primary health care, and how do we make them better?*

Chris Roberts (Uni. Of Manchester)
- *Clustering effects in an individually randomised trial: design considerations for the ‘therapist effect’*

Vera Friederichs (Uni. Strathclyde)
- *Estimation of key parameters and forecast for outbreak sizes for measles, mumps and rubella in Scotland*

1d Contributed papers (Council Chamber)

Official Statistics & Health

David Ohlssen (MRC)
- *A framework for identifying unusual performance in health care providers using routine data sources*

M F Longo (Uni. Of Glamorgan)
- *Can randomised trials rely on existing electronic data?*

David Spiegelhalter (MRC)
- *A risk-adjusted EWMA*

Alison Macfarlane (City University)
- *Where not to be born in the 1860s: interpretation of mortality statistics for home and institutional births*

15:45 – 16:15 Tea

<p>2a (Assembly Room) Continuing Professional Development Panel Discussion Led by Janet Dougharty (RSS Professional Affairs Committee Chair) & James Matcham (PSI Training Chair & Amgen)</p> <p>Panel members: Nick Andrews (Health Protection Agency) Nigel Howitt (PRA International) Artemis Koukounari (Imperial College) Stephen Pyke (Pfizer)</p>	<p>2b Contributed papers (Ferrier Hall) Epidemiology/Public Health Chris Metcalfe (Uni. Bristol) - <i>Wei, Lin and Weissfeld's marginal analysis of multivariate failure time data: Should it be applied to a recurrent events outcome?</i></p> <p>Fotios Siannis (MRC) - <i>A Multi-State Model for Joint Modeling of Terminal and Non-Terminal Events with Application to Whitehall II</i></p> <p>Janet Rudge (London Metropolitan) - <i>Modelling respiratory morbidity amongst older people at risk of cold homes</i></p>	<p>2c Contributed papers (Council Chamber) Unthemed Nicholas Drey (City University) - <i>Identification and evaluation of standardised datasets for measuring and monitoring access to health care</i></p> <p>Maria de los Angeles Lopez Tlahuiz, Tony Bendell (Uni. Leicester) - <i>The Use of Six Sigma and Lean Thinking in Health Care: A Challenge for the Mexican Health Care System</i></p> <p>Robert Newcombe (Wales College Medicine) - <i>A deficiency of the odds ratio as a measure of effect size</i></p>	<p>2d (Room D) Young Statisticians Contributions by & for statisticians with less than 5 years experience</p> <p>Jack Bowden (Uni. of Leicester) - <i>A Latent Variable Scorecard for Neonatal Baby Frailty</i></p> <p>Liz Mills (AstraZeneca) - <i>Prediction Modelling Of Proteomic Data</i></p> <p>Sarah Fenton (AstraZeneca) - <i>Investigating SNP Interactions Using Random Forests</i></p> <p>Kate Bendall (GSK) - <i>Validation of Composite Endpoints</i></p>
<p>17:30 Close</p>			

Tuesday continued

17:30 – 19:30 **Marble Hall**

Poster display and reception

The following posters will be presented:

Sarah Brown (University of Leeds)
- *Closeness to death and quality of life in Advanced lung cancer patients*

- *Minimisation – reducing predictability whilst retaining balance within centre*
- *Specifying significance levels when Justification of a non-inferiority margin is difficult*

Sandra Bonellie (Napier University)
- (with Abbi Green) *Cerebral Palsy Register for Scotland: Issues of Consent*
- *Changes in gestational age: a study using routinely collected data*

Nicola Cooper (University of Leicester)
- *Use of evidence in economic decision Models developed as part of health technology assessments*

Jonathan Cumming (Durham University)
- *Chain graph modelling for clinical decision support in orthopaedics*

Heather Dickinson (Newcastle University)
- *Mean treatment effect and individual Benefit – lifestyle interventions for high Blood pressure*

- *Quality of trials of lifestyle interventions*

Malcolm Farrow (Newcastle University)
- *Clinical decision-making for recent onset Headache using Bayesian belief networks*

Rob Gandy (Independent consultant)
- *A comparison of aseptic preparation and Usage in different NHS regions*

Aicha Goubar (MRC, Bristol)
- *Evidence-based models for HIV incidence, diagnosis rates, and risk behaviour: Bayesian synthesis based on routine surveillance data*

Kim Hawkins (University of Leeds)
- *Ethical review and the role of statisticians*

Robin Henderson (Royal Infirmary Edinburgh)
- *The use of Shewhart charts in the monitoring of the process of delivery of stroke care*

Paul Hewson (University of Plymouth)
- *Classification of multivariate health performance outcomes*

Eileen Holmes (Salford NHS Trust)
- *Monitoring MRSA at an acute NHS trust*

Roger Holder, Shakir Hussein (University of Birmingham)
- *Multilevel models and further modelling for repeated measures of INR levels and time in range*

Louise James (Health Solutions Wales)
- *A surveillance system for congenital anomalies in Wales*

Gareth John, Emma Evans, Sally Taylor (Health Solutions Wales)
- *Disease risk and the use of address history*

Nia Jones (Welsh Assembly)
- *Health in Wales: The new Welsh Health Survey*

Mona Kanaan (American University Beirut)
- *Elimination of measles from Lebanon: A Statistical analysis*

Mareike Kohlmann (Inst. for Statistik Munich)
- *Classifying disease progression by Longitudinal biomarkers in the absence of Gold standard*

Artemis Koukounari (Imperial College)
- *Impact of intestinal schistosomiasis in Ugandan children on anaemia and Haemoglobin levels before and after anti-schistosome chemotherapy*

Morven Leese (Institute of Psychiatry)
- *The SF-36 Quality of Life Scale: Is its scoring system appropriate for people with severe mental illness?*

Francesca Little (University of Cape Town)
- *The use of statistical models in the Analysis of the prevalence and density of Gametocytes in patients infected with Plasmodium falciparum*

Tatiana Macfarlane (Manchester University)
- *Aspects of data analysis of lifestyle factors of case-control study for the Alcohol Related Cancers and Genetic Susceptibility in Europe (ARCAGE) project*

Hin Man Mak (Hong Kong Poly. University)
- *A neglected symptom of cancer: insomnia*

Bradley Manktelow (University of Leicester)
- *A comparison of six methods of estimating confidence levels for an indirectly standardized outcome ratio*

James Miller (University of Glasgow)
- *Review of statistical methods for controlling disclosure*

Laurence Moore (Cardiff University)
- *Design of a cluster randomised trial to evaluate the Welsh Assembly Government Free Breakfast initiative*

Robert Newcombe (Wales College Medicine)
- *Bayesian estimation of false negative rate in a clinical trial of sentinel node biopsy*

Karen Ooms (Statwood)
- *A case study to demonstrate the recommended approach from NICE to assess uncertainty in cost effectiveness models*

Tom Ragan (INC DataSpectrum UK)
- *Strategies for handling missing data in Quality of life and other scales in clinical trials*

Craig Ramsay (University of Aberdeen)
- *A meta-analysis model for a binary outcome Incorporating case-series data*

Rafael Perera (Oxford University)
- *Action rules for monitoring of chronic diseases managed in primary care*

Khadija Rantell (University of Sheffield)
- *An analysis of risk adjusted outcomes following admission to paediatric intensive care by using the proportional odds mode*

Arne Ring (Boehringer Ingelheim Pharma)
Statistical analysis of ECG intervals
A K Roalfe (University of Birmingham)
- *Bayesian-based approach to the identification of patients with atrial fibrillation in primary care using general practice computer systems*

Zoe Roberts (University of Cardiff)
- *Multilevel modelling of antibiotic resistance*

Chris Robertson (University of Strathclyde)
- *Health effects of chronic exposure to air pollutants in Scotland*

Paul Seed (King's College London)
- *Model-based predictions using standardised residuals, with applications to the prediction of Down's syndrome, pre-eclampsia and other pregnancy complications*

Deborah Sims (Biogen Idec Limited)
- *Programming and personality*

David Spiegelhalter (MRC Cambridge)
- *Presentation of comparative performance data in the Healthcare Commission*

Gwyneth Thomas (Welsh Assembly)
- *A new child health database for Wales: National Community Child Health Database*

Stephen Walters (University of Sheffield)
- *The use of bootstrap methods for estimating sample size for health-related quality of life outcomes*

Robert West (University of Wales)
- *Cardiac rehabilitation: multicentre randomised controlled trial and update of meta-analysis*

- *Control or overcontrol of potential confounders in multivariate analysis: is social class a confounder*

C Wright, J Sim (Coventry University)
- *Simple statistical methods for single system (n=1) designs*

19:30 Wine reception at National Museum followed by dinner at 20:30

Day 2 (Wednesday):

8:45 – 9:15 Registration Open

Plenary 2 (Assembly Room)

– **Dataset Analysis.** Chair: John Whitehead (University of Reading)

John Whitehead (University of Reading) - Introduction to dataset

Results of analysis: Stephen Senn (Uni. Glasgow); Alun Bedding (Lilly); Simon Kirby (Pfizer)

Statistical Programming – The future (Room C)

Raulin Surujbally (Pfizer)

- *The Statistical Programmer - Where are we now and what does the future hold?*

Liz Thompson (GSK)

- *The Future Role of the Programmer*

Leo Valmas (Quintiles)

10:45 – 11:15 Coffee

Plenary 2 Cont. –Dataset Analysis. Chair: John Whitehead (University of Reading)

Rob Hemmings (MHRA) – Regulatory Comment

Audience discussion

John Whitehead (University of Reading) – Current developments in the area of dose selection

Statistical Programming – Validation & CDISC (Room C)

Michael Walega (Covance)

- *The CDISC Study Data Tabulation Model: A Statistical Programmer's Dream Come True or Worst Nightmare?*

Louise Webber (Roche)

- *Validation of macros*

Jim Ditchburn (Chiltern)

- *21 CFR Part 11 – Not just a Buzzword*

12:45 – 14:00 Lunch

<p>3a Tutorial (Council Chamber) Practical Bayesian Led by Nicky Best (Imperial) with Deborah Ashby (QMUL) & Phil Woodward (Pfizer)</p>	<p>3b Contributed papers (Room D) Evidence Synthesis & Meta-Analysis Julia Saperia (QMUL) - <i>Numbers in safety: heterogeneity in drug safety studies</i> Jaime Peters (Uni. Leicester) - <i>Disentangling publication bias and heterogeneity</i> Masayuki Henmi (Uni. Warwick) - <i>A Bound for publication bias in meta-analysis</i> Ashley Jones (Uni. Liverpool) - <i>Aggregate meta-analysis of longitudinal data</i></p>	<p>3c Contributed papers (Ferrier Hall) Cost-Effectiveness/Health Economics Keith Abrams (Uni. Leicester) - <i>Accounting for model uncertainty in cost-effectiveness analyses using Bayesian model averaging</i> Nicky Welton (Uni. Bristol) - <i>Cost-effectiveness, expected value of information and informative priors: a factorial trial on uptake of breast cancer screening</i> Aletta Nonyane (Birmingham) - <i>Bayesian mixture model for cost-effectiveness analysis</i> Samer Kharroubi (Uni. Sheffield) - <i>Calculating expected value of sample information for health research: A novel formulation using approximate Bayesian computation</i></p>	<p>3d Contributed papers (Assembly Room) Study Design Carl-Fredrik Burman (AstraZeneca, Sweden) - Adaptive size modifications and the dual test Adam Crisp (GSK) - <i>Re-estimating for non-inferiority of hazard in an ongoing time-to-event trial</i> Kim Hawkins (Uni. Leeds) - <i>Trial design: should we keep it simple?</i> Eddie Channon (Chirostat) - <i>When to close screening/run-in</i></p>	<p>Statistical Programming – Coder's Corner (Room C) Rob Walls (PPD) - <i>It's Proc Tabulate Jim, but not as we know it!</i> Rob Allis (Covance) - <i>Why use PROC SQL when I can use the Data Step?</i> Dave Smith (SAS) - <i>What is new in SAS 9?</i> 4th TBC</p>
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15:30 – 16:00 Tea

<p>4a Tutorial Cont'd. (Council Chamber) Practical Bayesian Led by Nicky Best (Imperial) with Deborah Ashby (QMUL) & Phil Woodward (Pfizer)</p>	<p>4b Contributed papers (Room D) Statistics in Dentistry Rebecca Brown (Uni. Of Cardiff) - <i>The use of zero-inflated models for modelling DMF data in dental epidemiology</i> Craig Ramsey (Uni. Of Aberdeen) - <i>Measuring experimental contamination effects in educational interventions: A case study from dentistry</i> Yu-Kang Tu (Uni. Leeds) - <i>What is regression to the mean? The relation between change and initial value revisited</i> Girvan Burnside (Uni. Liverpool) - <i>Design and analysis of clinical trials of topical fluorides for the prevention of dental caries in children</i></p>	<p>4c Contributed papers (Ferrier Hall) Quality of Life Measurement Tony O'Hagan (Uni. Sheffield) - <i>Bayesian nonparametric estimation of a health-related quality of life measure</i> Stephen Walters (Uni. Sheffield) - <i>The use of bootstrap methods for analysing health-related quality of life outcomes</i> Sanjoy Paul (Uni. Leicester) - <i>Comparing parametric and non-parametric regression techniques to examine angina quality of life questionnaire: Results from a large RCT in primary care</i> Helen Thorpe (Uni. Leeds) - <i>Analysis strategy for quality of life data: A practical example</i></p>	<p>4d Contributed papers (Assembly Room) Study Design Michael O'Kelly (Quintiles) - <i>The historical context of Fisher's "Analyse as you randomise"</i> M K Palmer (AstraZeneca) - <i>Repeated measures multi-level modelling of thickness of the Carotid artery</i> Amanda Farrin (Uni. Leeds) - <i>Challenges when using Zelen's Design in the 21st Century National Health Service</i> John Stevens (AstraZeneca) - <i>Assurance in clinical trial design</i></p>	<p>Statistical Programming – Graphics (Room C) Richard Pugh (Mango Solutions) - <i>Using S-PLUS to improve the quality of graphical output within your SAS environment</i> Peter Lane (GSK) - <i>Fitting the graph to the data, the medium and the audience</i> Frederic Coppin (MSD)</p>
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17:30 Close

From 19:30 Gala Dinner at Coal Exchange

Day 3 (Thursday):

9:00 – 9:15 Registration Open

Plenary 3 (Assembly Room)

– **Risk & Public Perception of Risk.** Chair: Stephen Senn (University of Glasgow)

Adrian Edwards (University of Cardiff) – Communicating risk: illusion or reality?

Deborah Ashby (QMUL) – SSRIs and suicide: statistics and statisticians in safety assessment

Adrian Ely (University of Sussex) – Handling risk and uncertainty: science, statistics and politics

11:15 – 11:45 Coffee

5a Tutorial (Council Chamber)

Data Mining

Led by David Hand
with Zhicheng Zhang
(both Imperial College)

5b Contributed papers (Ferrier Hall)

Cost-Effectiveness/Health Economics

Eleanor Pinto (Uni. Toronto)
- *Efficient estimation of semi-parametric models for censored cost-effectiveness data*
Richard Nixon (MRC)
- *Addressing the analytical issues that arise in multinational costing studies*
R R West (Uni. Wales)
- *Estimation of implied rates of discounting in health care decision-making*

5c Contributed papers (Room D)

Unthemed

Eddie Channon (Chirostat)
- *Relating means and standard errors to statistical analyses*
Gordon Taylor (Uni. Bath)
- *Open label extension studies*
Helen Thorpe (Uni. Leeds)
- *Problems in the analysis of surgical trials: A practical example of the possible solutions*

5d Contributed papers (Assembly Room)

Evidence Synthesis & Meta-Analysis

Catrin Tudor Smith (Uni. Liverpool)
- *Meta-analysis of individual patient data with time to event outcomes*
Nicola Cooper (Uni. Leicester)
- *Evidence synthesis of competing interventions when there is inconsistency in how effectiveness outcomes are measured across studies*
Guobing Lu (MRC)
- *Mixed treatment comparisons meta-analysis and consistency of 'direct' and 'indirect' information*

13:00 – 14:00 Lunch

6a Tutorial cont'd (Council Chamber)

Data Mining

Led by David Hand
with Zhicheng Zhang
(both Imperial College)

6b Contributed papers (Ferrier Hall)

Consent/Research Ethics

Kerry Hood (Uni. Of Cardiff)
- *Collecting data for disease registries without patient consent: what do the public think?*
Jane Hutton (Uni. Of Warwick)
- *The ethical issues in implementation research*

6c Contributed papers (Room D)

Unthemed

Paula Williamson (Uni. Liverpool)
- *Competing risks for anti-epileptic drug withdrawal: design and analysis issues*
Gillian Lancaster (Uni. Liverpool)
- *Development of a culturally appropriate developmental assessment tool for use on children in a rural African population*

6d Contributed papers (Assembly Room)

Evidence Synthesis & Meta-Analysis

Claudia Lozada-Can (Uni. Warwick)
- *Indirect comparison random effects meta-analysis: an application to orthopaedic surgery*
Alex Sutton (Uni. Leicester)
- *Methods for synthesising from studies evaluating diagnostic performance of a medical test for economic decision modelling*

15:00 – 15:15 Tea

Chair: Tim Holt (RSS President & University of Southampton)

Keynote Address: Andy Grieve (Former RSS President & Pfizer) – 30 years as a pharmaceutical statistician: lessons and regrets

Closing Remarks: Tim Holt

16:00 Close of Day & Close of Conference