

THE CAMBRIDGE STATISTICS DISCUSSION GROUP

Thursday 2nd February 2012 7:15 for 7:45

The Statistical Laboratory,
Centre for Mathematical Sciences,
Wilberforce Road, Cambridge, CB3 0WB

Elicitation of Expert Beliefs in Drug Development

Nelson Kinnersley
Roche Products Ltd,
Welwyn Garden City, UK

Abstract: Despite more than 25000 clinical trials starting in USA each year, published accounts of the elicitation of expert beliefs and the formation of subjective Bayesian prior distributions in clinical trials is extremely rare. However, a more substantial literature exists advocating such approaches its use based on theoretical considerations and practical applications in other domains (e.g. ecology). In the highly regulated environment of drug development, wide adoption of subjective priors is unlikely without sufficient evidence that elicitation techniques can be accurately relied upon to represent the beliefs of the experts from whom they were elicited. Following a short introduction to the basics of non-informative versus subjective priors, this presentation will focus on identifying the opportunities for increased use of subjective priors in drug development and proceed to outline the limitations of existing methods together with proposals for research into how to address those limitations.

Speaker: Nelson Kinnersley has worked as a statistician in the pharmaceutical industry in a number of organisations for over 20 years, helping to design and analyse clinical trials across Phases 1 to 4 and a range of therapeutic areas. Nelson is currently employed by Roche and managing a group of statisticians working on oncology trials. He is pursuing a PhD on a part-time basis in Bayesian methods under the supervision of Prof Deborah Ashby and Prof Martin Wilkins at Imperial College London and supervision from Dr Simon Day at Roche.

With the recent increased interest in the application of Bayesian methods for the design and analysis of clinical trials (particularly in the early stages of trials in humans) Nelson is researching how information external to the currently planned trial may be used efficiently in the design of clinical trials (or a series of clinical trials). The evaluation of the available methods of elicitation and construction of prior distributions is of particular interest in Nelson's work

Directions: The main entrance is reached from Clarkson Road by going along the footpath to the right of the Newton Institute, and turning left through the gatehouse towards the main building (Pavilion A), which has a glass front and a curved grassed roof. The main entrance is in the middle of the glass front. Coffee before the talk will be in the common room in Pavilion D, and the talk will be in Meeting Room 4 in Pavilion A. Free parking is available after 5pm on Clarkson and Wilberforce Roads.

Provisional Next Meetings:

15th March – David Daniels (Perse School) on 'Mathematics at the Perse school'.

3rd April – Lawrence Sherman (Institute of Criminology).

21st May – Darrel Ince (Open University).

Supper: Some members eat before a talk at the University Centre meeting in the downstairs bar at 6pm. All welcome !

Subscriptions: of 1 pound are now due for attending the 2011-2012 session.

Secretary: Peter Watson, MRC Cognition and Brain Sciences Unit, 15 Chaucer Road, Cambridge CB2 7EF;
telephone 01223 355294 Extension 801; E-mail peter.watson@mrc-cbu.cam.ac.uk

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