

THE CAMBRIDGE STATISTICS DISCUSSION GROUP

Thursday 10th May 2001 7:15 for 7:45

Darwin College,
Cambridge

Health Research Warning: Ignoring Missing Data Can Seriously Bias Your Estimates

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Abstract: Despite the awareness that ignoring missing data can seriously bias estimates, epidemiological studies continue in the habit. Multiple Imputation (MI) offers preventative treatment but it is not readily available in standard software packages.

Estimating the extent of excessive alcohol consumption in the general population is a problem because those who drink to excess are less likely to respond to surveys: alcohol consumption is Missing Not at Random (MNAR). The talk will describe a realistic simulation that demonstrates the advantages of MI over the usual habit of listwise deletion or naive methods of imputation, even where the data is MNAR. A practical way to implement this methodology will be presented.

Speaker: Margaret Ely originally graduated in Philosophy and Mathematics. Her earlier careers were in teaching and the software industry. On 'returning' she studied an MSc in Medical Statistics at Leicester in 1992/3. Since then her research studies include dementia in the elderly (at the Institute of Public Health in Cambridge), the effects of family structure on teenage children (at the Centre for Family Research, Cambridge) and alcohol problems in mid-life (at the department of Epidemiology and Public Health, University College London). She is now working as medical statistician and epidemiologist at Anglia Polytechnic University, and is studying missing data as a part time PhD student at UCL.

Directions: Darwin College is situated on the corner of Silver Street and Queen's Road. Free parking is available on Silver Street opposite the college and on Queen's Road. Admittance may be difficult after 7:45.

Provisional Next Meeting:

10th October – Simon Thompson (MRC Biostatistics).

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

Subscriptions: of 4 pounds per member are now due for the 2000-2001 session. Cheques should be made payable to Robert Milroy and may be posted to the secretary at the address below.

Secretary: Peter Watson, MRC Cognition and Brain Sciences Unit, 15 Chaucer Road, Cambridge CB2 2EF; telephone 01223 355294 Extension 380; E-mail peter.watson@mrc-cbu.cam.ac.uk