This 5-day short course introduces the topic of the analysis of linked data at an introductory to intermediate level. It acquaints health services researchers, clinical practitioners and managers with the theory and skills needed to analyse linked health data. The modular structure of the course provides participants with a theoretical grounding on each theme, followed by a hands-on practical exercise in our computer lab each day, using de-identified linked NSW data files.

Who should attend?
The course is suitable for people with no previous experience in the analysis of linked health data. However, it does assume familiarity with introductory statistical and epidemiological methods, as taught, for example, in a Master of Public Health degree course. The computing component of the unit also assumes a basic familiarity with computing syntax used in SAS and methods of basic statistical analysis of fixed-format data files. Participants must have this assumed knowledge.

Topics covered:
- Introduction to data linkage and its history
- Description of CHeReL and how record linkage works
- Quality of data linkage
- Ethics, data security, applying to CHeReL for data
- Types of population health databases
- ICD coding
- Overview of linked data studies
- Constructing study populations
- SAS commands for arrays, merging datasets, tagging records, creating sequence variables
- Measures of health care utilisation; health care episodes
- Prevalent pool effect
- Inter-hospital transfers
- Data quality I: Preparing data for analysis
- Data quality II: Accuracy and reliability of data sources
- Measures of health care outcomes: treatment outcomes and adverse events
- Introduction to survival analysis and Cox regression
- Available covariates: sociodemographic, illness severity, comorbidity
- Methods of risk adjustment

Venue:
Edward Ford Building (A27), University of Sydney
Lectures: Norman Gregg Lecture Theatre, Level 2
Exercises: Computer Lab, Level 3
Learning objectives:
On completion of this short course participants will be able to:

- understand the theory of data linkage methods and features of comprehensive data linkage systems, sufficient to know the sources and limitations of linked health data sets, and in particular those for NSW;
- apply epidemiological principles to the design of studies using linked data;
- construct numerators and denominators for the analysis of disease trends and health care utilisation and outcomes;
- assess the accuracy and reliability of data sources;
- check data linkages and assure the quality of the study process, e.g. consistency of definitions, missing data;
- list the issues to be considered when analysing large linked data files;
- write syntax to prepare linked data files for analysis, derive exposure and outcome variables, relate numerators and denominators and produce results from statistical procedures.

Speakers:
Ms Joanne Chicco, NSW Health
Dr Timothy Dobbins, Cancer Research Centre, UNSW
Dr Jane Ford, Perinatal Health Research Group, University of Sydney
Ms Katie Irvine, Centre for Health Record Linkage (CHeReL)
Ms Sanja Lujic, University of Western Sydney
Ms Deborah Randall, University of Western Sydney
Assoc Professor Christine Roberts, Perinatal Health Research Group, University of Sydney
Professor Judy Simpson, School of Public Health, University of Sydney

Cost:
Cost for the short course is $2430 including GST.
Discounts are available for a group of participants from the same institution or organization, as follows: 3-4 participants, 10% discount; 5 or more participants, 20% discount.
The full course fee must be paid by 9 November 2009. Cancellation after this date will incur a fee of $100 per participant for administration.
Registration fee includes morning tea.

Currently enrolled University students wishing to take the course for credit should contact Prof Simpson (see below).

Places are limited
Places are strictly limited so book early to avoid disappointment.

Need to know more?
Professor Judy Simpson  Phone: 02 9351 4369
Professor of Biostatistics  Email: judys@health.usyd.edu.au
School of Public Health
The University of Sydney
Registration form

Tax Invoice University of Sydney ABN 15 211 513 464

Name: ……………………………………………………………………………………………..
Organisation: ……………………………………………………………………………………
Postal Address: ……………………………………………………………………………………
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Email: ……………………………………………… ………...…………………………

Course fee: $2430

I wish to pay by:

☐ Cheque (payable to University of Sydney School of Public Health)
  Is cheque attached?: [ ] Yes (Amount $ …………………..) [ ] No

☐ Credit card:    Visa [ ]   Mastercard [ ]
  Amount $………………..
  Card number …………………………………………………………………………..
  Name on card …………………………………………………………………………
  Expiry date  …./.…..
  Signature …………………………………………………………………………
  Date  …./.…/…..

NOTE: A place will not be confirmed until payment of course fee is received

Please post or fax completed form with payment to:
Ms Vicki Williams, Learning Support Officer
School of Public Health, A27
University of Sydney, NSW 2006
Phone: 02 9351 8635   Fax: 02 9036 6247
Email: enquiries@health.usyd.edu.au