Who’s working with big health data in New Zealand and Australia? A show and tell

A series of 5-minute presentations with plenty of time for interaction

Chaired by Rod Jackson

Big data is being sold as the next big thing in health research, but what can it deliver?

There is a surprising amount of health research using big data underway in New Zealand and Australia and this master class will bring together a wide range of researchers working in the field to discuss their work.

Aims: The goals of the master class are to: i) give attendees an opportunity to find out what is going on in the field and to discuss their own work; ii) provide an opportunity for researchers working in overlapping areas to discuss possible collaborations; and iii) identify opportunities to share experiences, methodologies etc relevant to sourcing, extracting, managing and analyzing big health data.

Content: Presenters will give short (5 minute) presentations covering their data sources and how they manage, link and analyse the data, illustrated with examples of their work.

The presenters are:

- Tony Blakely, University of Otago, Wellington (census mortality analyses and burden of disease and cost-effectiveness of intervention’s modelling)
- Cliona Ni Mhurchu, University of Auckland (big nutrition data)
- Barry Milne, University of Auckland (linked data in social health research)
- John Streeter, ProCare PHO Auckland (using patient data in primary care for quality improvement)
- Simon Ross, Analytical Services, MoH, Wellington (the national data collections)
- Catherine Gerard, Health Quality & Safety Commission Wellington (the New Zealand Atlas of Healthcare variation)
- Sue Wells, University of Auckland (PREDICT: using electronic clinical decision support in primary care to generate big data)
- Andrew Kerr, University of Auckland (ANZACS_QI: a nationwide acute coronary syndrome register)
- Jason Arnold or James Harris, Pharmac Wellington (analyzing national pharmaceutical dispensing data)
• Louisa Jorm, University of Western Sydney (big health data research in Australia)
• Lianne Parkin, University of Otago, Dunedin (using national pharmaceutical claims data for drug safety research)
• Michael Baker, University of Otago, Wellington (linked data for research on infectious diseases, environment, housing and health)

Who should attend: Anyone with an interest in big health data

Requirements: None

Speaker biographies

Rod Jackson
Rod Jackson is a professor of epidemiology at the University of Auckland. He is medically trained, has a PhD in epidemiology and is a member of the NZ College of Public Health Medicine.

He teaches clinical and public health epidemiology to undergraduate and postgraduate students and to health professionals.

He has over 30 years of research experience in Cardiovascular Disease (CVD) epidemiology. He is one of the architects of New Zealand risk-based clinical guidelines for managing CVD risk. For the past 15 years his research has been based around using web-based decision support tools linked to regional and national electronic health databases to implement, monitor and improve CVD risk assessment and management.

Tony Blakely
Professor Tony Blakely is an epidemiologist at the University of Otago, Wellington, New Zealand. His portfolio of research includes the New Zealand Census-Mortality Study (NZCMS) and CancerTrends linking the national censuses with mortality and cancer data to allow monitoring and research on ethnic and socio-economic inequalities, directing the Health Inequalities Research Programme and the HRC-funded Burden of Disease Epidemiology, Equity and Cost Effectiveness Programme to assess the health impact and cost effectiveness and equity impacts of preventative and cancer control interventions.

Cliona Ni Mhurchu
Professor Cliona Ni Mhurchu leads a programme of nutrition research at the National Institute for Health Innovation. Her current research focuses on effects of population-level interventions and policies, including health-related food taxes/subsidies, front-of-pack nutrition labels, and healthier food reformulation. She was Principal Investigator of the SHOP RCT of effects of price discounts and tailored nutrition advice on supermarket food purchases, and SPEND which modelled the impact of food taxes and subsidies on mortality from non-communicable disease in New Zealand. She is currently leading the Starlight RCT,
which will assess the effects of front-of-pack nutrition labels on real-world supermarket food purchases. Cliona has published more than 120 scientific papers in peer-reviewed journals and is Director of the HRC research programme, "Dietary Interventions: Evidence & Translation" (DIET) [http://www.diet.auckland.ac.nz/].

**Barry Milne**
Dr Barry Milne is an Associate Director at the Centre of Methods and Policy Application in the Social Sciences (COMPASS) at the University of Auckland. He has a long history of work on longitudinal studies in New Zealand and the UK, particularly in the area of mental health. His current research interests include micro-simulation, socio-economic and ethnic inequalities, and the assessment of population health and well-being using whole population datasets.

**John Streeter**
Not yet provided

**Simon Ross**
Simon is a MSc graduate of the University of Otago (2003) and has worked for a number of New Zealand health sector organisations since 2004 including: Southlink Health (2004-2006), Capital and Coast District Health Board (2007) and the Ministry of Health (2007-2014). Simon has been Team Leader of Analytical Services at the Ministry of Health since 2009, where he manages a team responsible for distributing information from the Ministry’s National Collections. The team has three primary roles: distributing National Collections datasets, advising on the use and analysis of National Collections data and protecting patient privacy and information security. From March – June 2014, Simon was on secondment looking at options for safely integrating health data into a cross-government information centre called the Integrated Data Infrastructure, managed by Statistics New Zealand.

**Catherine Gerard**
Not yet provided

**Sue Wells**
Not yet provided

**Andrew Kerr**
Not yet provided

**Jason Arnold**
Jason Arnold is the Manager, Analysis at PHARMAC in Wellington. He received a Post Graduate Diploma in Statistics and Bachelor of Science in Statistics from Waikato University before moving to Wellington in 1999 to take up an analyst position at PHARMAC, and has
led Analysis there since 2009. Leading achievements during Jason’s time at PHARMAC include contributing towards developing the ‘One Heart Many Lives’ public health programme for cardiovascular risk, co-authored in the NZ Medical Journal on ‘Variation in the use of medicines by ethnicity during 2006/07 in New Zealand’ and ‘Usage and equity of access to isotretinoin in New Zealand by deprivation and ethnicity’, and has extensively modelled patient co-payment changes. He lives in Wellington with his wife Rachael and three children.

James Harris
Not yet provided

Louisa Jorm
Louisa Jorm is the Foundation Professor of Population Health and Director of the Centre for Health Research in the School of Medicine at the University of Western Sydney. She is an epidemiologist whose areas of expertise include data linkage, research using administrative health data and facilitating the policy and practice uptake of research.

In the last 5 years she has published more than 50 scientific papers and been awarded almost $10M in research funding. She has played a key role in building infrastructure and capacity for health data linkage in Australia, including the Secure Unified Research Environment (SURE) remote access data laboratory.

Lianne Parkin
Dr Lianne Parkin is a Senior Lecturer in the Department of Preventive and Social Medicine at the University of Otago. She completed a medical degree and a post-graduate diploma in obstetrics at the University of Otago, before training and working for several years in general practice in New Zealand and Australia.

Subsequently, she undertook further training in public health medicine and completed a PhD with a pharmacoepidemiological focus. Her current research interests include the use of routinely collected electronic health and pharmaceutical dispensing data to study the safety of medicines.