The Rhise Group Symposium
22 November 2013

A one day symposium on research about the 2010 / 2011 Canterbury Earthquakes

Rolleston Lecture Theatre
University of Otago
Christchurch
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The Rhise Symposium Working Group would like to extend a warm welcome to you, and we hope you enjoy this Symposium. We have arranged a packed schedule of plenary sessions, question time with speakers and time to meet with researchers displaying their posters. The traditional weekly CDHB Grand Round has been incorporated into the programme, and all attendees are welcome to join us for lunch in the foyer.

We would like to take this opportunity to warmly thank Rhise’s major sponsors for their continued funding of research into the health implications of seismic events in Canterbury;

- Emergency Care Foundation in association with Lane Neave Ltd
- Canterbury Medical Research Foundation
- Health Research Council
- Emergency Care Coordination Teams

We especially thank the University of Otago for hosting this event through the provision of the excellent Rolleston Lecture Theatre facility, and the Canterbury District Health Board for their on-going support of Rhise.

Professor Michael Ardagh
Chair
Rhise Group
The Emergency Care Foundation in association with Lane Neave Ltd is proud to support the Rhise Symposium 2013. We have supported the Rhise Group from its beginnings shortly following the 22\textsuperscript{nd} February 2011 earthquake in Christchurch. The Rhise Group is an inclusive Canterbury-wide collaborative bringing together researchers investigating the impact of the earthquakes. This research has provided insights of international interest and will be important in planning future disaster responses.

\textbf{Dr Martin Than}  
Chairperson  
Emergency Care Foundation
**Schedule of Speakers**

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<td>9.00</td>
<td>Welcome</td>
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<td>Professor Peter Joyce - Dean, University of Otago (Christchurch)</td>
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<td>9.20</td>
<td>How did the earthquakes change health service utilisation in Canterbury?</td>
<td>Mr David Meates - CEO, Canterbury and West Coast District Health Boards</td>
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<td>9.40</td>
<td>The initial health-system response to the Christchurch Earthquake</td>
<td>Professor Michael Ardagh - University of Otago</td>
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<td>The 2010/2011 Canterbury Earthquakes: context and cause of injury</td>
<td>Professor David Johnson - Massey University/GNS Science</td>
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<td>Morning tea</td>
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<td>Spatial variations in stress related health compared to earthquake exposure: preliminary results and future directions</td>
<td>Professor Simon Kingham - Canterbury University</td>
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<td>11.15</td>
<td>The role of Public Health in building resilience: from pandemics to earthquakes</td>
<td>Dr Alistair Humphrey - Medical Officer of Health (Canterbury)</td>
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<td>Lunch</td>
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<td>12.15</td>
<td>Earthquake stress and broken hearts</td>
<td>Dr Cameron Lacey - University of Otago</td>
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<td>12.45</td>
<td>The impact of Christchurch earthquakes on the health of older people</td>
<td>Dr Kathy Peri - University of Auckland</td>
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<td>Learning from Canterbury communities: factors that help and hinder community resilience</td>
<td>Ms Louise Thornley - Quigley &amp; Watts Ltd / Ms Emma Rawson - Community &amp; Public Health</td>
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<td>Occupational health of front line workers in Christchurch</td>
<td>Associate Professor David McBride - University of Otago</td>
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<td>The experience of acute disaster response in Christchurch Hospital Emergency Department</td>
<td>Dr Sandra Richardson - University of Otago</td>
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<td>The psychological effects of the Canterbury earthquakes and all that has followed</td>
<td>Dr Caroline Bell - University of Otago</td>
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<td>The impact of Christchurch earthquake on availability of diagnostic-test results</td>
<td>Mr Kevin Taylor - Canterbury Health Laboratories</td>
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<td>4.50</td>
<td>Closing</td>
<td>Professor Michael Ardagh</td>
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How did the earthquakes change health service utilisation in Canterbury?

Mr David Meates - Chief Executive Officer, Canterbury District Health Board

David Meates is Chief Executive of the Canterbury and West Coast District Health Boards – responsible for the health services for over 550,000 New Zealanders, and the leadership of over 9,500 direct employees and thousands more NGO health sector workers contracted by the DHB. He is a big picture thinker and has particular skills in leading change, and motivating and mobilising others to be part of the transformation. David is passionate about health and what’s possible when people grasp the vision and work collectively for the greater good. The achievements of the Canterbury Health System are testimony to his leadership. Originally from Canterbury, David has worked in both the private and public sectors, in NZ and the UK. He has also led and been involved on a number of national groups ranging from workforce negotiations to CEO alliances. Recent experiences in Canterbury have shown David is adept at managing large teams through a crisis and developing and implementing robust recovery plans.

The initial health system response to the 22 February 2011 Christchurch earthquake

Michael Ardagh,1 Sandra Richardson,1 Viki Robinson,2 Martin Than,2 Paul Gee,2 Seton Henderson,2 Laura Khodaverdi,2 John McKie,2 Gregory Robertson,2 Philip Schroeder,3 Joanne Deely4

1University of Otago, 2Christchurch Hospital, 3Rolleston Medical Centre, 4Canterbury District Health Board.

Michael Ardagh is a Fellow of the Australasian College for Emergency Medicine and has a PhD in Bioethics. He is Professor of Emergency Medicine at the University of Otago, Christchurch, and Specialist in Emergency Medicine at Christchurch Hospital. He is National Clinical Director of Emergency Department Services (a position also known as ‘Target Champion’), to assist with implementation of the ‘Shorter Stays in the Emergency Department’ health target. He is Chair of the Rhise Group (Researching the health implications of seismic events) which was formed to encourage collaborative research regarding the Christchurch earthquakes of 2010 and 2011.
The 2010/2011 Canterbury Earthquakes: context and cause of injury

David Johnston,¹ Sarah Standring,² Kevin Ronan,³ Michael Lindell,⁴ Thomas Wilson,⁵ Jim Cousins,⁶ Emma Aldridge,² Michael Ardagh,⁷ Joanne Deely,⁸ Steven Jensen,⁹ Thomas Kirsch,¹⁰ Richard Bissel¹¹

¹GNS Science/Massey University, ²University of Auckland, ³Central Queensland University, ⁴Texas A&M University, ⁵University of Canterbury, ⁶GNS Science, ⁷University of Otago, ⁸Canterbury District health board, ⁹California State University, ¹⁰Johns Hopkins University, ¹¹University of Maryland

David Johnston is a senior scientist at GNS Science and Director of the Joint Centre for Disaster Research at Massey University. His research focuses on human responses to disasters, crisis decision-making, public education, and building community resilience and recovery. David is Chair of the international Integrated Research and Disaster Risk Scientific Committee. He is also on New Zealand’s Royal Society Social Science Advisory Panel, and the editor of the Australasian Journals of Disaster and Trauma Studies, and founding editor of the Journal of Applied Volcanology.

Spatial variations in stress related health compared to earthquake exposure: preliminary results and future directions

Simon Kingham,¹ Daniel Hogg,¹ Kim Reed,¹ Tomas Wilson,¹ and Michael Ardagh²

¹University of Canterbury, ²Otago University

Simon Kingham is Professor of Geography and Director of the GeoHealth Laboratory at the University of Canterbury, in Christchurch, New Zealand. He has carried out research in health and environment issues for over 20 years, specifically looking at environmental exposure. He is a Director of the GeoHealth Laboratory which is funded by the Ministry of Health to undertake applied research in the areas of health geography, spatial epidemiology and Geographical Information Systems. He has published his research widely and has a BA (hons) and a PhD in Geography from Lancaster University, UK.
The role of Public Health in building resilience: from pandemics to earthquakes

Alistair Humphrey - Medical Officer of Health for Canterbury

Alistair Humphrey is a Public Health Physician and GP in Christchurch. As Medical Officer of Health for Canterbury, he is designated by and responsible to the Director General of the Ministry of Health. Alistair is on the national pandemic preparedness group for New Zealand and the national group looking at the health effects of climate change (HAIFA). In 2011/2012, Alistair addressed the UNISDR Global platform, the Towards a Safer World (TASW) group and the Global Risk Forum One Health Summit and other international meetings. He assisted the WHO Emergency Risk Management group in the development of their Safe Hospital Initiative and was an evaluator for the WHO’s Emergency Risk Framework exercise. Alistair holds a senior lectureship post at the University of Otago Medical School. He is a fellow of the Australasian Faculty of Public Health Medicine, Royal Australian College of General Practitioners, Australian College of Rural Medicine and a member of the UK Faculty of Public Health.

Earthquake stress and broken hearts

Cameron Lacey - University of Otago

Cameron Lacey is a consultation-liaison psychiatrist with a strong research interest in identification and treatment of psychiatric and cultural factors in medical illness. He is the principle investigator of a team of University of Otago Christchurch researchers including Prof R Mulder, Prof M Kennedy, Prof V Cameron, J Zarifeh and Dr P Bridgman. This group has been investigating factors that contribute to the risk of developing stress cardiomyopathy.
“It’s a thing you’ve got to sort of learn to live with really”: the findings from the Shaken Up study of older adults aged over 75 years following the seismic events in Christchurch, New Zealand, 2011

Kathy Peri - Auckland University

Kathy Peri is a registered nurse, senior lecturer and research Fellow at the School of Nursing, University of Auckland, and works two days a week at the Counties Manuka District Health Board as the Clinical Nurse Director for Health of Older People, New Zealand. Her research interests are centred on improving health outcomes for vulnerable older people and she is currently involved in a number of research projects including health robotics, non-pharmacological dementia interventions. Kathy was the Director of Nursing at the Princess Margaret Hospital in Christchurch during the earthquakes and has over the past two and half years been awarded three research grants to explore the impact of the Canterbury earthquakes on the quality of life in community dwelling older people over the age of 75 years. Kathy will present the results of the HRC research project today.

1.55 pm

Learning from Canterbury communities: factors that help and hinder community resilience

Louise Thornley, ¹ Emma Rawson, ²

¹Quigley and Watts Ltd, ²Community and Public Health

Louise Thornley is a social researcher specialising in public health. She contracts part-time to Quigley and Watts Ltd, an independent Wellington-based research company, and has recently started as Family Planning’s Research and Policy Advisor. Louise’s previous work experience is in government, university and community sectors. Before joining Quigley and Watts Ltd in 2006, she was a Senior Policy Analyst for the National Health Committee, and Research Fellow for Otago University, Wellington. Her background is in youth work and community development. She worked in Christchurch’s community sector for five years.

Emma Rawson, Ngati Ranginui, Ngai te Rangi, Raukawa, is a Māori Health Promoter based at the Canterbury District Health Board in Christchurch. Emma’s passions are Māori workforce development and Te Reo Māori as an important leadership tool for change, enhancing identity and wellbeing. She is a recent graduate of Leadership Training for Māori in Public Health, holds a B.A. Maori, University of Canterbury, Post Graduate Certificate in Public Health, University of Otago and is working on gaining a Masters in Health Science. Emma is currently working on projects in Christchurch that support wellbeing and resilience in Māori communities and building sustainable community infrastructure in vulnerable communities.
2.25 pm

**Occupational health of front line workers in Christchurch**

**David McBride,¹ Kirsten Lovelock,¹ Daniel Shepherd,² Rex Billington²**

¹ Department of Preventive and Social Medicine, University of Otago, ²Department of Psychology, Auckland University of Technology

*David McBride is an occupational physician who did his initial training with the British Coal Corporation as a Medical Officer. His responsibilities were collieries in the Staffordshire and Lancashire coal fields, the Mines Rescue Station at Boothstown and an experimental coal liquefaction plant in North Wales. He did his academic training at the University of Birmingham, and then was appointed Clinical Lecturer in 1991. He was appointed Senior Lecturer in Occupational Health at the University of Otago in 1995 and Associate Professor in 2011. He has been in the army as a reservist since 1973 and has some knowledge of ‘conflict medicine’, having served with the New Zealand Defence Force in Timor Leste and Afghanistan. On volunteering for another engagement with the NZDF serendipity must have been a factor in his posting as a Medical Officer to Burnham Camp over the period November 2010-December 2011. He then found himself on another ‘tour’ of Afghanistan in January 2012.*

2.55 pm

**The experience of acute disaster response in Christchurch Hospital Emergency Department**

**Sandra Richardson - University of Otago**

*Sandra Richardson is a Senior Lecturer with the Centre for Post Graduate Nursing Study at the University of Otago, Christchurch and Nurse Researcher in the Emergency Department, Canterbury District Health Board. Sandra’s research interests include Emergency Department crowding, advanced nursing practice and the impact and experience of the Canterbury Earthquake events.*
The psychological effects of the Canterbury Earthquakes and all that has followed

Caroline Bell - University of Otago

Caroline Bell is a consultant psychiatrist and senior lecturer at the University of Otago in Christchurch with an expertise in anxiety. She has had a role in managing the psychosocial responses to the Canterbury earthquakes across the community and is the clinical lead of a treatment team for people with severe Post Traumatic Stress Disorder from the earthquakes.

The impact of Christchurch earthquakes on availability of diagnostic-test results

Kevin Taylor,¹ Peter George,¹ Joanne Deely²

¹Canterbury Health Laboratories, ²Canterbury District Health Board

Kevin Taylor is the Business and Innovations Manager at Canterbury Health Laboratories. He was part of Canterbury Health Laboratories earthquake response team. He is a medical laboratory scientist, specialising in laboratory quality management and solving problems with unique and novel outcomes.

Peter George is Clinical Director of the Canterbury Health Laboratories. He is a consultant to nine private and public hospitals in both the North and South islands of New Zealand. He is the recipient of over 30 major research grants. His research interests are molecular pathology of human disease and the development, translation and application of advanced methods for the diagnosis of disease, and cardiac risk.

Joanne Deely is a scientist and medical writer. She was commissioned by Canterbury Health Laboratories to document the impact of the Christchurch earthquake on the laboratories. She is a member of the Rhise working group, Medical Writers Association Australasia (MWAA), and Technical Communicators Association, New Zealand (tcanz), and Royal Society of New Zealand (MRSNZ).
Demographics and Victim Behaviour

1. The 22nd February 2011 Canterbury Earthquake: A gender disparity amongst earthquake victims

Sarah Standring, Michael Ardagh, Joanne Deely, David Johnston, Viki Robinson, Sandra Richardson, Martin Than, Pauline Gulliver, Alieke Dierckx

Sarah Standring is a fourth year medical student studying at the University of Auckland, based at Auckland City Hospital in 2013. For the past three summers, she has worked under the guidance of Professor David Johnston and Professor Mike Ardagh on projects investigating injuries resulting from the major earthquakes in Christchurch. She is interested in emergency medicine and medical teaching, but would also like to become more involved in research in future.

2. Immediate behavioural response to earthquake in Christchurch New Zealand

Michael Lindell, Carla Prater, Shih-Kai Huan, David Johnston and Julia Becker

David Johnston is a senior scientist at GNS Science and Director of the Joint Centre for Disaster Research at Massey University. His research focuses on human responses to disasters, crisis decision-making, public education, and building community resilience and recovery. David is Chair of the international Integrated Research and Disaster Risk Scientific Committee. He is also on New Zealand’s Royal Society Social Science Advisory Panel, and the editor of the Australasian Journals of Disaster and Trauma Studies, and founding editor of the Journal of Applied Volcanology.

3. Human response to earthquake shaking: analysis of video footage of the 2010-2011 Christchurch earthquake sequence

Emily Lambie, Thomas Wilson, David Johnston, Steven Jensen, Erik Brogt

Emily Lambie is currently studying towards her Masters degree at the University of Canterbury. Her research topic is developing a methodology to analyse immediate behavioural response to earthquake shaking, using video footage from the recent Christchurch earthquake sequence. Her interests are natural hazards, risk assessment and communication and disaster risk reduction.
Challenges Faced in Healthcare and Education

4. Smoking, relapse and the Christchurch earthquakes

**Vivien Daley** - Smokefree Manager, Canterbury District Health Board

**Vivien Daley** is the Smokefree Manager of the Canterbury District Health Board, with responsibility for developing the strategic direction for Smokefree in the CDHB area. Her current focus is the implementation of the ABC Strategy for Smoking Cessation across primary and secondary care, and the community. Her previous work history includes some years at Pegasus Health as Population Health Manager, time at the Christchurch School of Medicine conducting research in the adolescent sexual health area, and many years working in health promotion in the community. Vivien is a current member of the National Smokefree Working Party. She has held the role of Vice-President of the Public Health Association of New Zealand and was a Council member of the Health Promotion Forum (NZ) for many years. Vivien is a past Chairperson of Smokefree Canterbury.

5. The challenges for general practitioners (GPs) following the 2010/2011 Canterbury earthquakes

**Sarb Johal**, Zoe Mounsey, Robyn Tuohy, David Johnson - Joint Centre for Disaster Research, Massey University, New Zealand

**Sarb Johal** is Associate Professor of Disaster Mental Health, Joint Centre for Disaster Research, School of Psychology, Massey University. Sarb’s research interests include psychological impacts of and recovery from disasters.

6. The participation and quality of life outcomes following physical disability as a result of an earthquake: a systematic review

**Joanne Nunnerley,**¹ Gary Hooper,¹ Tim Woodfield,¹ Kathryn McPherson,² Jennifer Dunn¹

¹Department of Orthopaedic Surgery & Musculoskeletal Medicine, University of Otago, Christchurch. ²Health and Rehabilitation Research Institute, Auckland University of Technology

**Joanne Nunnerley** graduated as a physiotherapist in the UK in 1996. She has worked at the Burwood Spinal Unit in Christchurch since 2001, and part time as a clinical researcher for the Burwood Academy of Independent Living since 2007. Joanne is currently a PhD candidate at the University of Otago, Christchurch.

7. Lessons from the February 2011 for the training and preparation of Post Graduate Year 1 Doctors

**Dale Sheehan**, John Thwaites, Blair York, Alex Lee - Canterbury District Health Board

**Dale Sheehan** is Medical Education Coordinator, Medical Education and Training Unit, CDHB and Senior lecturer in clinical teaching and supervision, School of Health Sciences University of Canterbury. Dale’s interests are in junior doctor education, clinical teaching and supervision.

**John Thwaites** is Director of Clinical Education, Medical Education and Training Unit, CDHB. As well as being a physician John has a strong research and practice interest in medical education at all stages of the medical education continuum.

**Blaire York and Alex Lee** where PGY1 House Officers at CDHB at the time that this work was undertaken.

Sonali Weerasekara, Sonia Giovinazzi, Arin Basu, Thomas Wilson - University of Canterbury

Sonali Weerasekara conducted this research, towards her MSc. on Hazard and Disaster Management at the University of Canterbury, under the supervision of: Dr Sonia Giovinazzi (Department of Civil and Natural Resources Engineering), Dr Arin Basu (School of Health Sciences), Dr Thomas Wilson (Department of Geological Sciences), and Dr Elena Moltchanova (Department of Mathematics and Statistics).

9. Costs and Effects: Analysing the social costs of deaths and injuries in the 22 Feb earthquake

Ann Brower,¹ David Johnston,¹ Kelvin Berryman³

¹Lincoln University; ²GNS Science and Joint Centre for Disaster Research, Massey University, Wellington; ³GNS Science, Wellington.

Ann Brower is a Senior Lecturer in Environmental Policy in the Department of Environmental Management at Lincoln University. She holds a PhD in Environmental Science, Policy, and Management from the University of California Berkeley. She also holds Masters degree in Forest Science from Yale University, and Political Science from the University of California Berkeley. Her specialty is environmental policy, especially as it relates to state-owned lands and natural resources in the US, Australia, and New Zealand. She is the author of ‘Who owns the high country?’ (Craig Potton Publishing, 2008), which stimulated a national debate about the on-going South Island land reform that is transforming the landscapes of the Southern Alps. Borrowing from Wildavsky (1973), her book aims to uncover how great expectations in Wellington were dashed in Wanaka. She has published in numerous journals, including the Georgetown International Environmental Law Review, Conservation Letters, NZ Journal of Ecology, and Land Economics.

Resilience in Healthcare

10. Crisis leadership in an acute clinical setting: Christchurch Hospital Intensive Care Unit, February 2011

Lev Zhuravsky, Charge Nurse Manager, Day Stay Unit, Christchurch Hospital

Lev Zhuravsky is a nurse manager with particular expertise in crisis leadership, trauma, critical care nursing, and project management. He has worked in trauma ICU at one of the largest trauma centres in Israel. From 2002-2008, Lev worked in the ICU of Christchurch hospital. In a capacity of CNM of medical ward Lev was actively involved in relocation and re-establishment of acute medical services after the Christchurch earthquake. In 2013, he completed his Masters on crisis leadership in the intensive care unit of Christchurch Hospital during February’s earthquake. Lev’s main research and project development interests include: creating competency-based crisis leadership training programmes, motivation to lead, fostering and support of informal leadership in crisis, shared leadership in critical situations, crisis and disaster management. He received a Christchurch Earthquake Award for Service in 2012.
11. The value of integrated midwifery care in natural disasters

Rose Barker, 1 Samantha Burke, 2 Margaret Kyle, 3 Claire MacDonald 3

1 Midwife, 2 Director of Midwifery, Women’s & Children’s Health, Christchurch Women’s Hospital, Canterbury District Health Board, 3 Co-Chairs, Canterbury / West Coast Region New Zealand College of Midwives

This poster has been put together in a joint initiative by the Canterbury / West Coast Region and National Office of the New Zealand College of Midwives and by staff from Women’s and Children’s Health, Canterbury District Health Board.

12. Resilience of the Canterbury Hospital System to the 2011 Christchurch Earthquake

Jason McIntosh, 1 Caitlin C Jacques, 2 Sonia Giovinazzi, 3 Thomas D Kirsch, 2 Thomas Wilson, 1 and Judith Mitrani-Reiser 2

1 Department of Geological Sciences, University of Canterbury; 2 Department of Civil Engineering, Johns Hopkins University, Baltimore, MD, USA; 3 Department of Civil and Natural Resources Engineering, University of Canterbury.

Sonia Giovinazzi’s expertise and research activities focus on seismic risk analysis and damage scenarios, toward seismic risk mitigation and management and post-disaster resilient recovery at regional scale. Sonia is currently a Research Fellow in Risk Management at the Civil and Natural Resources Engineering Department, at University of Canterbury, NZ. In the aftermath of the Canterbury earthquakes, Sonia led different projects funded by the Natural Hazard Research Platform of NZ, to provide on-the-ground support to the initial recovery phase for multiple end-user and agencies, including the Canterbury Health District Board (CHDB). Sonia acted as a consultant for the Canterbury Earthquake Recovery Authority (CERA) on decision support tools for post-disaster reconstruction planning at urban scale.

13. Software in Hard Times: creating a disaster response application for health systems

Jacob DuVal 1 and Dominic Johnpillai 2

1 Canterbury Business Solutions, 2 Christchurch Hospital

Jacob DuVal is working for Canterbury Business Solutions currently. He is an intermediate software engineer. Jacob obtained his BSc from the University of Canterbury and has excelled as a young software engineer, playing key roles in large social media platforms and medical sector jobs.

Dominic Johnpillai is a final year medical student and well versed in public health research, having received the 2011 Pathology Dissertation prize at the University of Cambridge where he commenced his studies.
14. “Ripple effects” on older people of the Canterbury earthquakes: results from a national longitudinal study

Sally Keeling,¹ Fiona Alpass,² Chris Stephens,² and Brendan Stevenson²

¹University of Otago, Christchurch, ²Massey University

Sally Keeling is a social scientist who works as a Senior Lecturer in the Department of Medicine, University of Otago, Christchurch. Her research interests for the last 20 years have explored the social context of ageing in New Zealand, through involvement with several longitudinal interdisciplinary studies of ageing, health and wellbeing, with a particular focus on social support and family caregiving, and implications for policy and practice.

15. The influences on return to employment/productivity for people injured as a result of the Christchurch February 22nd earthquake: a grounded theory study

Joanne Nunnerley,¹ Jennifer Dunn,¹ Kathryn McPherson,² Tim Woodfield,¹ Gary Hooper¹

¹Department of Orthopaedic Surgery & Musculoskeletal Medicine, University of Otago, Christchurch; ²Health and Rehabilitation Research Institute, Auckland University of Technology

Joanne Nunnerley graduated as a physiotherapist in the UK in 1996. She has worked at the Burwood Spinal Unit in Christchurch since 2001, and part time as a clinical researcher for the Burwood Academy of Independent Living since 2007. Joanne is currently a PhD candidate at the University of Otago, Christchurch.

16. Employee resilience and organisational factors: The workplace as a venue for building community resilience

Katharina Näswall, Sanna Malinen, Joana Kuntz - University of Canterbury

Katharina Näswall, Senior Lecturer, Department of Psychology, University of Canterbury. Is interested in employee and organisational resilience, job insecurity, employee well-being and health, boundaryless working life, and research methods.
Voices of Children

17. Voices of Resilient Five-Year-Olds

Annabel Carter - Department of Health Sciences, University of Canterbury

Annabel Carter is completing a Masters in Child and Family Psychology. Her interests are psychology and helping and teaching children and young people. In 2012, she worked in Melbourne on a project for diverse populations, funded by the Royal Commission following the 2009 bushfires disaster. She has worked in both education and social services in New Zealand. Currently she is working for the Ministry of Education in a Primary school in Christchurch. Annabel’s current research studies young children’s concepts of helping, caring and learning, in children who experienced the earthquakes during their preschool years. Her Masters’ thesis is on resilience and wellbeing of new entrant children attending a primary school in an Eastern suburb of Christchurch. She completed a literature review of the effects of earthquakes and natural disasters on children’s mental health. She is keen to pursue further study in Child and Family Psychology and to continue research on longitudinal changes in children’s mental health, post-earthquake.

18. Participatory research with children on their earthquake experiences

Carol Mutch - University of Auckland

Carol Mutch is an associate professor in the School of Critical Studies in Education, in the Faculty of Education, at the University of Auckland. She is the director of the Te Whakatere au Papori (Navigating Social Currents) Research Unit. Her teaching, research and writing is in educational policy, research and evaluation methodologies, and social and citizenship education. She is a Christchurch resident who commutes to Auckland weekly. Following the earthquakes she undertook research into the role of schools following the earthquakes. This research is on-going as she follows schools through the post-earthquake school closures and amalgamations. She has recently co-edited a special issue of the journal Disaster Prevention and Management on different disciplinary lenses on the Canterbury earthquakes.

Mental Health and Wellbeing

19. The psychology of earthquake stress cardiomyopathy, non-cardiac chest pain and myocardial infarction

Julie Zarifeh,1 Roger Mulder,2 Andrew Kerr,3 Christina Chan,4 Paul Bridgeman4

1Psychiatric Consultation/Liaison Service, Canterbury DHB; 2 University of Otago, Christchurch; 3Department of Cardiology, Middlemore Hospital; 4Department of Cardiology, Christchurch Hospital.

Julie Zarifeh is a Senior Clinical Psychologist working across Psychiatric Consultation-Liaison Service/Cardiology Departments. Her role is to undertake assessments and psychological interventions for CDHB patients suffering significant co-morbid physical health and emotional health symptoms. This work is across the disciplines of Oncology, Cardiology, Nephrology, Dermatology, Medical/surgical specialities and other fields. Julie also undertakes teaching and liaison with medical/allied health CDHB staff, as well as the Cardiac-Rehabilitation service and
other community NGOs. Following the Sept 2010 Christchurch earthquake Julie was part of a small MDT research team who investigated the potential role of psychological factors as having played a role in the presentation of a noticeable increase in the number of (mostly) women who were admitted to Christchurch Hospital with ‘Broken Heart Syndrome,’ (Takotsubo Cardiomyopathy).

20. Slipping between the cracks: metacognitive therapy for earthquake-related post-traumatic stress disorder: A case study

Jennifer Jordan - University of Otago, Christchurch

Jennifer Jordan is a senior research fellow and clinical psychologist working in the Clinical Research Unit at the Department of Psychological Medicine at the University of Otago, Christchurch, New Zealand. She also works for the Canterbury District Health Board at a specialist Anxiety Disorders Service and in the CDHB Adult Speciality Service Earthquake Treatment Team (ASSETT). She has been an investigator and therapist in a series of randomised clinical trials, evaluating different psychotherapies for serious mental disorders including eating disorders, depression and latterly post-traumatic stress disorder (PTSD) related to the Christchurch earthquakes. She is the principal investigator of a pilot study (still recruiting participants) of metacognitive therapy vs. cognitive behaviour therapy for earthquake-related PTSD.


Daniel Hogg,1 Simon Kingham,1 Thomas Wilson,1 Michael Ardagh2

1GeoHealth Laboratory, Department of Geography, University of Canterbury. 2University of Otago.

Daniel Hogg is a Geography Ph.D. Candidate in the GeoHealth Laboratory at the University of Canterbury. He graduated with distinction with a M.Sc. degree in Geoinformatics from the University of Osnabrueck in 2010. Afterwards Daniel worked for two years in a private enterprise as a GIS Software Developer on several WebGIS projects building up and enhancing spatial data infrastructures. His research area is the health outcomes of natural disasters with a focus on earthquakes and a special research interest on the stress-related health outcomes after the 2010/2011 Christchurch earthquakes.

22. PTSD symptoms and coping in children beginning school: preliminary findings

Kathleen Liberty,1 Sonja Macfarlane,1 Arindam Basu,1 Jeff Gage,1 and Maureen Allen2

1School of Health Sciences, University of Canterbury
2Te Paeroa Resource Teachers of Learning and Behaviour services for south and east schools in Christchurch

Kathleen Liberty is Associate Professor of Early Intervention in Health Sciences, University of Canterbury. Kathleen’s research interests include early intervention in public health, children’s learning, health and wellbeing, disability and disorders of childhood and adolescence.
23. Psychological effects of the 2010 and 2011 Canterbury earthquakes and aftershocks in clients with anxiety disorders

Caroline Bell,¹ Helen Colhoun,² Ron Chambers,² Sarah-Eve Harrow,² Claire Gilbert,² Jenny Jordan,² Meredith Blampied,² and Terri Motraghi²

¹Otago University. ²Cantebury District Health Board.

Caroline Bell is a Psychiatrist and Clinical Head of the Anxiety Disorders Service in Christchurch. This is the only publicly funded specialist service for treating patients with severe anxiety disorders in New Zealand. She is also a senior lecturer at the Department of Psychological Medicine at the Christchurch School of Medicine and Health Sciences, University of Otago. Her research interests include investigating the neurobiological mechanisms involved in anxiety disorders and the clinical effectiveness of different treatment modalities for these conditions. This recent work has focused on the use of a computerised cognitive behaviour therapy treatment for patients with social phobia, panic disorder and GAD.

The Anxiety Disorders Service is a community-based team of clinicians who specialise in the treatment of adults experiencing severe anxiety disorders. After being referred from within mental health services or from their general practitioner, clients are given a full psychiatric assessment and provided with a number of evidence-based treatment options. These may include individual or group therapy, medication reviews and trials, as well as support from both physiotherapist and dietician services. To assist with continued development of best practice treatment for anxiety disorders and to evaluate treatment efficacy, the Anxiety Disorders Service conducts research on their group therapy programmes, within both a clinical and academic framework.

Experiences of Libraries and Administrators

24. Administration in the disaster zone - moving stories from Pathology

Linda Kerr - University of Otago

The Department of Pathology, University of Otago Christchurch, is a research-led academic department located in several laboratories in the main School of Medicine building. The Department’s administration team: Linda Kerr (Department Manager), Alice Milnes (Administration Assistant) and Nicki McMillan (Finance Administrator), set up the Department office in several different locations over a 22 month period and continued to provide full support to academic and clinical staff who were working from a variety of locations throughout the city.

25. “How we survived the earthquakes”

Elizabeth Hughes, University of Otago, Christchurch

“How we survived the earthquakes” is a poster prepared by Canterbury Medical Library for the University of Otago General Staff Conference 2012 in support of the presentation “Fragmented Campus: How University of Otago Christchurch General Staff Navigated the Road map to earthquake recover” presented by Jane Mariner of Mihi, Robyn Maguigan and Dean Pester of the Deans Department.
26. Libraries and well-being in post-earthquake Christchurch

Sarah Gallagher,¹ Andrew Adams,² Anna Howard,² Donna Robertson,² Ryan Reynolds,³ Coralie Winn³

¹University of Otago Library (Dunedin), ²Christchurch City Libraries, ³Gap Filler Trust

Sarah Gallagher is an Academic Liaison Librarian at the University of Otago Health Sciences Library in Dunedin. She holds an MA in Classics from the University of Otago and an MLIS from Victoria University of Wellington. At the time of the earthquakes Sarah was working for Boffa Miskell in Christchurch. On hearing about the Gap Filler initiative she contacted Coralie Winn and with Ryan Reynolds with an idea for a book exchange. Together they developed the Think Differently Book Exchange on the corner of Kilmore and Barbadoes Streets. Sarah is interested in the role of libraries as places and in their role in supporting the wellbeing and mental health of communities.