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HEALTH

RESEARCH
INSTITUTE

RESEARCH HIGHLIGHTS 2022





HEALTH RESEARCH INSTITUTE

RESEARCH HIGHLIGHTS 2022





**#1 IN THE WORLD
FOR REDUCING
INEQUALITIES**

(THE IMPACT RANKINGS, 2022)

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UC'S VALUES



The University of Canberra acknowledges the Ngunnawal people, traditional custodians of the lands where Bruce campus is situated.

We wish to acknowledge and respect their continuing culture and the contribution they make to the life of Canberra and the region. We also acknowledge all other First Nations Peoples on whose lands we gather.

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HRI STRATEGY

Through strategic collaboration, the University of Canberra's Health Research Institute is building a healthier future for Canberra, Australia, and the world.

We are a flexible, interdisciplinary team who are proactive in the health ecosystem, identifying and responding to research needs and opportunities as they evolve, creating impact on policy and practice.

WHAT WE DO

We improve wellbeing, health, and healthcare by conducting research to identify factors that improve policy and service delivery.

We focus on health and wellbeing as products of systems, particularly how they vary depending on your interaction with the healthcare system, where you live and work, how you move through your community, your access to facilities and resources, your connection to people and places, and the social, built and natural environment.

We collaborate and co-design with researchers, government, industry, healthcare providers and consumers to turn research into real world impact. This includes roll out of best-practice health policy and design of strategies to achieve positive system-wide changes, not just in healthcare but in the broader environment.

WHY WE DO IT

We want to build a better future for the Canberra region, Australia, and the world. In particular, we are committed to helping improve equity of access to good health, wellbeing and healthcare for all.

HOW WE DO OUR WORK

We focus on real-world needs, collaborating with partners to develop evidence-based solutions. We partner with stakeholders to research a problem and translate the findings to solutions applied in the real world.

WHY IT MATTERS

Wellbeing, health, and health-care impacts everyone, which means our work in health and wellbeing will impact every member of the communities we work with.



INTRODUCTION

From the Executive Dean, Faculty of Health



The University of Canberra's Health Research Institute is embedded within the rich multidisciplinary environment of the Faculty of Health and the health system of the Australian Capital Territory. Consequently, HRI is well placed to tackle complex health issues and translate research findings into policy and practice.

The position of HRI in the University and ACT enables research co-designed with partners, communities, consumers and end users. As a result, our research asks the right questions that are answered through inclusive research designs that have practical, important, feasible outcomes. The evidence and impact of the work conducted in 2022 can be found in this report.

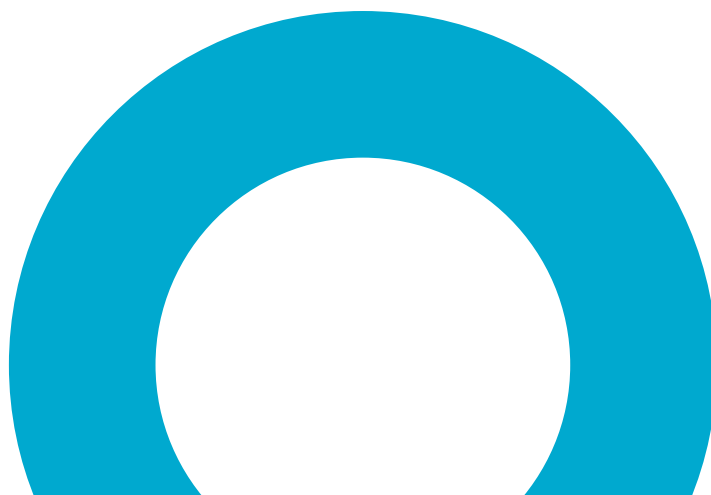
Our research is firmly anchored to the Civic Mission of the University of Canberra through engagement with the ACT Government and local industry and the conduct of large research trials in the ACT. At the same time our international partnerships allow us to share our knowledge and expertise around the world and bring their expertise to the ACT.

HRI has continued to move from strength to strength in its quest to improve health outcomes for individuals and communities nationally and internationally. HRI's role in research, training and education ensures a pipeline of well-equipped researchers ready to tackle local and global health challenges.

Congratulations to the staff, students, collaborators and partners of HRI for the impressive list of achievements in this report.

HRI will continue with its ambitious research agenda, but for now we are delighted to share with you this report that outlines our achievements in 2022.

Professor Michelle Lincoln
Executive Dean, Faculty of Health



DIRECTOR'S MESSAGE

Health Research Institute (HRI)

This has been an exceptionally good year for the Health Research Institute which has seen growing national and international recognition of our expertise. Through research and strategic collaboration, we continue to build a healthier future for Canberra and the world.

Creating impact on policy and practice through partnership, lies at the very heart of what we do, and we are pleased to announce formal MoA agreements with Australian Institute of Health and Welfare, Esri Australia, Public Health Foundation of India and Loyola University in Spain. Through these partnerships we will narrow the gap between the academic and public practice sectors, thereby facilitating actionable change.

Important progress was made across several core activities that underpin our engagement with the research sector and the broader community. In Canberra, our research in partnership with the ACT Government in 'Living Well in the ACT and Region' provided important information on the impact of the COVID pandemic and natural disasters on the wellbeing of our community. The findings from our ACT study of pharmacists in aged care provided formative input for the national roll-out of this service model planned in 2023.

The launch of our Mental Health Policy Unit enabled us to showcase our GLOCAL (Global and Local Observation and mapping of CAre Levels) projects which are undertaken across Australia and internationally in over 50 countries, providing a knowledge base for evidence informed policy and planning. Funding from the European Union's Horizon Research and Innovation Programme has enabled us to collaborate with partners across Europe to promote wellbeing and health and reduce the impact of mental health problems at the workplace.

Despite the continued challenges presented by COVID-19, the Institute has been successful in attracting ~\$7 million of new research funding (in addition to the \$19 million in current projects) that links our research with broader strategic policy contexts and enables partnership with a wide range of industries and consumers. This augurs well for future collaboration and influence for the Institute.

I would like to take this opportunity to thank the Institute's staff and students, who have demonstrated flexibility and resilience in adapting to the recent challenges of the pandemic and have continued to 'make a difference' and to create opportunities to enhance our research impact for better health and care for all.

Professor Rachel Davey
Director



2022 HIGHLIGHTS

At a glance



33

staff

17

PhD
students

22

honorary
staff



~\$7m

in **new research income**
in addition to \$19 million of
continuing research funding
(43% category 1)



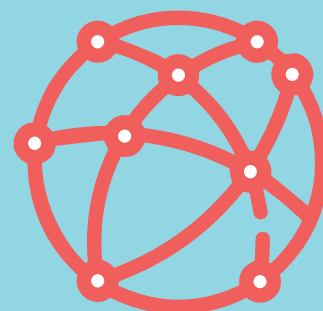
>100

community engagement
and collaborations across
Australia with **impact on**
local and national policy



>50

Global research projects in
>50 countries **across the**
world



>70%

of our research publications
are in the **top 10% journals**
for the disciplines of
Public Health and Health
Services Research



151–200
band

Shanghai Ranking's Global
Ranking of Academic Subjects
2022 for **Public Health**

OUR PEOPLE IN 2022

Professor Rachel Davey (Director)

Rachel is the Foundation Director of the Health Research Institute and Chief Investigator with the \$220 million Digital Health Co-operative Research Centre (DH CRC). She also leads the flagship DH CRC theme “Changing Health Trajectories”. Rachel’s research interests are broad and include; physical activity for health and wellbeing, ecological models that emphasize multiple levels of influence on health behaviours and the design, delivery, and evaluation of public health interventions and health services re-design.

Professor Luis Salvador-Carulla (Deputy Director)

Luis is a psychiatric epidemiologist and the lead for the Mental Health Research Unit. Luis was formerly head of the Mental Health Research Unit at the Australian National University. His field of interest is decision support tools for the analysis of complex health systems and policy in mental health, ageing, disability and intellectual developmental disorders. He is honorary member of the World Psychiatry Association, past-president of the association of Spanish Researchers in Australia Pacific and scientific secretary of the Instituto Cervantes Academic Forum in Australia.

Associate Professor Nasser Bagheri

Nasser is a spatial epidemiologist/medical geographer. Nasser is the recipient of an Australian Research Council DECRA Fellowship and co-leads the Visual and Decision Analytics (VIDEA) lab at the Health Research Institute. His research focuses on chronic diseases risk assessment and in particular, cardiovascular disease (CVD), diabetes, cancers, dementia, multiple sclerosis, and mental health. His primary research focus is on the application of spatial risk assessment methods and population-based intervention studies.

Marcus Blake

Marcus is the technical manager for the Australian Geospatial Health Lab with a background in geospatial data and systems design. His research interest focusses on geographical and statistical methods and their application to census, survey and administrative data. He was formerly employed by the Australian Bureau of Statistics in Enterprise Geospatial Infrastructure section.

Dr Suzanne Carroll

Suzanne’s research interests are in improving our understanding of the multiple interrelated influences, environmental and social, that drive or constrain health behaviour and outcomes. Understanding environmental and social influences is essential to inform targeted interventions to reduce population health disparities. Her research involves use of Geographic Information Systems to characterise environments and complex statistical approaches including multilevel modelling and structural equation models to assess relationships.

“We have a brilliant culture of collegiality, respect and belonging”

Dr Michael Dale

Michael has a background in the sports and exercise sciences, Michael’s research interests include the role of access to physical activity resources in the prevalence of sarcopenia and sarcopenic obesity in the elderly, the effect of the built environment on cardiometabolic health, and trends in children’s physical fitness.

Associate Professor Nicole Freene

Nicole has a strong interest in the primary and secondary prevention of chronic disease and increasing the populations’ physical activity levels, particularly in middle-aged adults. This was the focus of her PhD titled *‘Physical Activity At Home: Long-term effectiveness of a community group exercise versus physiotherapist-led home-based physical activity program in middle-aged adults’*. She is a founding member of the National Physiotherapy for Physical Activity group and a committee member of the Australian Cardiovascular Health and Rehabilitation Association of NSW/ACT Professional Development Committee. Nicole supervises both Honours and PhD students. Her current research focuses on increasing physical activity levels and decreasing sedentary behaviour in adults, both in healthy and cardiac populations.

OUR PEOPLE IN 2022 (cont.)

Dr Maryanne Furst

Maryanne has a background in diverse health settings, both clinical and academic, in physical and mental health, and intellectual disability. Her current research focuses on the provision and delivery of health care to people with a lived experience of mental illness as well as to those with an intellectual disability, at all levels in health care delivery systems. In 2022, Maryanne developed the first Atlases of health and wellbeing services based on an Indigenous Social and Emotional Wellbeing model of health, in Cairns and Yarrabah.

Dr Sunil George

Sunil is an early career public health academic whose research focuses on health inequity and access to healthcare within marginalized and Indigenous communities. There are wide disparities in the health status of different social groups which have significant social and economic costs both to individuals and societies.

Professor Neeraj Gill

Neeraj is a senior Consultant Psychiatrist at the Gold Coast Hospital, Gold Coast Hospital and Health Service, and Professor at the School of Medicine, Griffith University, Gold Coast, Australia. He is a member of the Qld Mental Health Review Tribunal (MHRT). Neeraj is an elected director on the Board of the Royal Australian and New Zealand College of Psychiatrists (RANZCP). He is the secretary of the World Psychiatric Association (WPA) Section on Psychiatry, Law and Ethics.

Susie Giugni

Susie is the family Liaison Co-ordinator for the project “Good Start in Life for Young Children”.

Dr Hossein Tabatabaei Jafari

Hossein is an academic researcher and has contributed to research topics from Mental Health and Cerebral Atrophy. He has a passion to understand the brain structural and functional changes during early development and late decline in human cognition in normal healthy people as well as in those with psychiatric and neurological disorders.

Dr Antiona Kish

Antiona's principal research interests centre in the areas of health, family and child psychology. This is particularly around families with children who have a chronic illness or additional roles, their quality of life and wellbeing, stress, work, and family experiences and parenting. She is also interested in researching the use of adverse parenting practices (e.g., smacking), and other aspects in the areas of work/life conflict or balance and parent and/or child mental health and wellbeing.

Dr Jane Koerner

Jane has an academic background in health promotion and epidemiology. She has worked in women's domestic violence and youth homeless services. While undertaking a PhD, Jane lead and collaborated on studies evaluating community-based HIV prevention interventions and lectured in health promotion and international health. Jane's research interests include; infection control, palliative care. She is currently project manager for the Pharmacists in Residential Aged Care RCT.

Vincent Learnihan

Vincent has worked internationally both in technical and consulting capacities applying Geographic Information Systems (GIS) to urban planning, transportation and public health data. His current research areas include the application of GIS to understanding spatial distribution of chronic disease, research into the associated clinical risk factors and health behaviours, and the social and built environment determinants.

Associate Professor Sue Lukersmith

Sue's research focus concerns two related streams: health services and best practice person-centred, integrated care for people with disability or chronic conditions; implementation research and impact analysis. Some of Sue's areas of expertise relate to mixed methodologies (including nominal groups, mapping and framing information, realist evaluation), classifications and frameworks, decision-support systems for health and social policy, rehabilitation (including occupational therapy) practice for complex health and social service interventions, measuring and evaluation of care coordination/case management, guideline development and implementation, person-centred approaches.

Celia Maddox

Celia is an administrative officer with the Regional Wellbeing Team supporting research examining the wellbeing, livability, and resilience of rural and regional Australians.

Associate Professor Itismita Mohanty

Itismita is a senior researcher in Health Economics. She completed her PhD in Economics from the University of Sydney in 2009. She has strong interest in quantitative modelling of economic, social and health related issues preferably using applied data analysis, programming or computer modelling methods, econometric analysis and policy evaluation methods.

Dr Mel Mylek

Mel's area of research focusses on the social dimensions of natural resource management in Australia, specifically looking at how working with natural resources influences people's health and wellbeing. She has most recently been exploring the health and wellbeing of people working in the forest industry across Australia and is currently examining the health and wellbeing issues in rural and regional Australia.

Associate Professor Theo Niyonsenga

Theo has applied statistical methods to research focusing on, but not limited to, the areas of multivariate data analysis methods such as structural equations modelling, longitudinal and multi-level data analysis, spatial statistics with application to spatial epidemiology.

Jonathan Ramke

Jonathan is a research officer for the *Good Start in Life for Young Children* project.

Professor Clive Sabel

Clive is a spatial data scientist working in the nexus between spatial data informatics, health and the environment. His research focusses on the over-arching theme of individual level spatial data. This can mean working with point-pattern data (often residential location) to reveal epidemiological relationships to environmental exposures or patterns e.g. building whole life-course exposures to social and environmental sources, understand wellbeing in urban areas and data mining 'Big Data' such as twitter feeds and sensors for spatial-temporal trends.

Professor Jacki Schirmer

Jacki leads the Regional Wellbeing Survey, an annual survey in Australia examining the views of rural and regional Australians about the liveability and resilience of their community, and their own wellbeing and resilience. In addition to leading the Regional Wellbeing Survey, Jacki's personal research interests focus on understanding the social dimensions of natural resource management, particularly how people's access to and use of natural resources affects their health and wellbeing.

Dr Ralf Schroers

Ralf is a GIS professional, with expertise in spatial analysis, data science and data system integration. Since 2013 he has been working in the sector of health geography. He had completed a German Diploma of Natural Resource Planning and later a MSc. in Geospatial Science at University of Queensland (UQ) in 2006.

Dr Katie Speers

Katie is a post-doctoral research fellow, her PhD investigates the effects of physical activity and cardiometabolic risk factors on the autonomic nervous system of children. She primarily uses heart rate variability and saliva sampling as non-invasive methods for measuring and interpreting the stress response. Katie is interested in understanding the interplay between lifestyle, the autonomic nervous system, and mental health/behaviour.

Codes Thomson

Codes is an administrative officer with the Regional Wellbeing Team supporting research examining the wellbeing, livability, and resilience of rural and regional Australians.

Professor Gavin Turrell

Gavin's primary research interests are in social epidemiology, with a focus on the social determinants of health and health inequalities. His research is population-based and much of it examines how the neighbourhood environment interacts with individual-level factors to influence health and related behaviours and risk factors. Gavin was recently a Chief Investigator on an NHMRC Centre of Research Excellence in Healthy, Liveable, and Equitable Communities, where he led a research program examining whether the built environment is causally related to health and well-being.

OUR PEOPLE IN 2022 (cont.)

Associate Professor Penny Upton

Dr Penney Upton is an experienced research psychologist whose work focuses on the improvement of health and wellbeing across the lifespan. Her work has had significant influence on local and national policy and strategy in both Australia and the UK. As part of this work Penney is committed to the development of best practice and is co-author of the evidence-based practice questionnaire (EBPQ) and the student evidence-based questionnaire (S-EBPQ) two psychometrically sound measures which continue to have an impact internationally in both clinical and educational settings. Penney is the lead UC academic in the National Best Practice Unit for Tackling Indigenous Smoking which involves research translation and training to support best practice in population level tobacco control across Australia.

Jonathan Ward

Jonathan is a research management professional with a focus on contact management, pre- and post-award activities, and process development. He works as the Senior Advisor, Research Management here in Health Research Institute at the University of Canberra and received a Master of Engineering in Photonics from the Australian National University in 2018. Following his time in research, Jonathan moved into Research Management so that he could remain connected to research, applying his skills to improve support for researchers and enhance collaboration between research with industry.

Dr Cindy Woods

Cindy is a Research Fellow and she is currently working in as a project management role for a Movember funded mental health evaluation project involving 15 different implementation projects across seven countries. Before joining HRI, she was working at the Centre for Health Equity, Melbourne School of Population and Global Health, University of Melbourne and the Judith Lumley Centre, La Trobe University. Over the past 10 years, her research has focused on public health, Indigenous health, mental health, trauma and resilience, health services research and epidemiology.

Vivian Yu

Vivian is a trilingual speech pathologist proficient in English, Cantonese and Mandarin. She is skilled in Applied Behaviour Analysis and is passionate about healthcare, research, and early intervention. Vivian currently works and supports the delivery of project activities within the Good Start in Life project. She works collaboratively with the research team, Clinical Educators, and students.

ADMINISTRATION TEAM

Nicole O'Connor

Nicole is an administrative officer (Research) within the Mental Health Policy Unit and has a background in neuroscience with experience in Indigenous health research in urban and remote communities.

Nicole Thacker

Nicole joined the HRI in 2022 to help support the administrative team.

HIGHER DEGREE BY RESEARCH PhD STUDENTS

Joseph Anumba

Topic: Spatial heterogeneity, geographical variation and related risk factors of obesity; and their relationships between built and social environment features in Canberra region, Australia.

Miranda Batten

Topic: Evaluating the implementation of an aged care intervention.

Kimberly Brown

Topic: Exploring associations between wellbeing and regenerative agriculture.

Poulomi Chowdhry

Topic: Profiles of health issues, healthcare utilization and its cost: A study of older workforce by type of economic activities in India.

Ibrahim Haider

Topic: Medication management in aged care.

Susan Hartono

Topic: Growing up in Australia: the effects of parental immigration status, country of origin, and acculturation on the dynamics of children's body weight status.

Sara Hudson

Topic: Assessing how Indigenous social enterprises impact Indigenous health and wellbeing.

Sushmitha Kasturi

Topic: Geographic variation in the association between the risks of mental ill-health and cardiometabolic health in young population in Australia.

Vincent Learnihan

Topic: Residential instability and mental health outcomes: A case study of middle aged residents of Brisbane, Australia.

Gweneth Leigh

Topic: Is the schoolyard sick? Investigating the design impacts of secondary school outdoor spaces on student wellbeing.

Xi Li

Topic: Socioeconomic disparities in health outcomes following surgery requiring admission in people with complex needs in New South Wales.

Tapas Mazumder

Topic: Neonatal mortality in Bangladesh.

Jeff Mitshabu

Topic: Multigenerational Dietary and Lifestyle transition in Sub-Saharan African and Congolese Australian: effects on cardiometabolic risk factors.

Sundus Nizamani

Topic: It takes two to tango: A couples-based intervention to reduce metabolic risk in parents and offspring.

Kacie Patterson

Topic: Behavioural interventions for cardiac rehabilitation.



Some of the HRI PhD students.

Samjhana Shrestha

Topic: Assessing the role of potential mediators in understanding the relationship between the social and built environment and adult obesity.

Mel Triantafyllou

Topic: Relationships between local residential and within home physical and social environments and wellbeing from birth to early adulthood.

Thomas Vasey

Topic: Active, safe travel to school.

OUR PEOPLE IN 2022 (cont.)

ADJUNCT HONORARY STAFF

Dr Danish Ahmed

Dr Danish Ahmed is a trained physician with advanced training in public health and research data analytics. Trained in clinical medicine from the University of Delhi and public health from the University of Oxford and the University of Canberra, Danish has a career interest in improving the design, delivery and evaluation of health systems to improve population health and wellbeing.

Associate Professor Amir Aryani

Amir is the Head of the Social Data Analytics (SoDA) Lab in the Social Innovation Research Institute. The Lab applies contemporary and emerging co-op data analytics techniques to provide insight into health and social problems. Amir has experience with large-scale and cross-institution projects in Australia and Europe, and he has participated as investigator and project lead in securing in more than \$37M funding in three areas of research and innovation.

Professor Margaret Cargo

Margaret's research expertise is in the assessment of context and implementation (i.e., intervention dose, fidelity, adaptation) in complex population health interventions and systematic reviews. She has worked in partnership with government, not-for-profit and the Aboriginal community-controlled health sector to identify and prioritise needs at local, state and national levels. Program planning and evaluation projects have included: prevention of childhood obesity, type 2 diabetes, tobacco control, Aboriginal parental engagement, Aboriginal grief and loss, and built community environments related to heart health.

Professor Charles Claudianos

Charles is a trained health researcher and medical scientist and an expert across multiple disciplines including mental and public health, neuroscience, molecular science and genomics. More recently his research focuses on neuropsychiatric disorders, neuroscience and mental health. He is also a Consultant/Honorary Professor at the Australian National University and a Visiting Scientist with CSIRO.

Associate Professor Dr Anindita Das

Associate Professor Dr Anindita Das has over twenty years of clinical and research experience in diagnostics, antimicrobial stewardship, infection control, infectious serology and infectious diseases molecular diagnostics both in India and Australia. Dr Das' research at the Canberra hospital include antimicrobial resistance, laboratory diagnostics, hospital acquired infections and infection control.

Professor Paresh Dawda

Paresh is a General Medical Practitioner, academic and researcher with expertise in clinical leadership, quality and patient safety improvement. His clinical interests include the management of chronic conditions and those with complex needs e.g. frail elderly. This has led to a practice with a strong focus on aged care and palliative care. His non-clinical interests include research, education and training. He works as an independent consultant advising organisations on developing high-performance health systems.

Dr Diego Díaz-Milanés

Diego is currently working at the Universidad Loyola Andalucía (Spain) and his area of research focuses on improving mental health care provision by using decision support systems. It includes relative technical efficiency assessment and Bayesian networks development for guiding policy making. He is also interested in health promotion and disease prevention.

Dr Summer Finlay

Summer is a Yorta Yorta woman who grew up in Lake Macquarie. Dr Finlay is a Lecturer at the University of Wollongong in the School of Health and Society and is employed as a Postdoctoral Fellow at the University of Canberra in the Health Research Institute. She has worked in health at the national level and has strong professional connections across the country in the Aboriginal Community Controlled Health Service sector.

Professor Carlos Garcia-Alonso

Carlos is the Acting Vice-Chancellor and Deputy Vice-Chancellor of Research at the Universidad Loyola Andalucia in Spain. His main areas of interest are operational research and health systems engineering. Carlos has designed and developed the following software prototypes (main designs): computer-based system for the assessment of autocorrelation geographical analysis (to identify and locate highly significant — prevalence and incidence — spatial areas mainly for health care), computer-based system for the evaluation of relative technical efficiency (health care management) and a simulation model for the assessment of illnesses costs (health care management).

Associate Professor John Goss

John Goss has worked as a health economist for over 30 years. For many years he was Principal Economist at the Australian Institute of Health and Welfare where he and his team produced the Health Accounts for Australia. These Health Accounts included a disease dimension and separately estimated health expenditure for Aboriginal and Torres Strait Islander peoples. John continues to collaborate with the AIHW on Disease Expenditure.

Professor Michael Moore

Michael Moore was previously the CEO of the Public Health Association of Australia and the Vice President/President Elect of the World Federation of Public Health Associations. Michael is a former Minister of Health and Community Care and was an independent member of the Australian Capital Territory Legislative Assembly for four terms from 1989 to 2001. In his retirement he is also a political and social columnist.

Adjunct Associate Professor Dr Nalini Pati

Nalini is a Senior Staff Specialist at the Department of Haematology at The Canberra Hospital (TCH) and is an honorary academic haematologist at ANU Medical school. He has been involved in many national and international clinical trials at Canberra hospital including the studies at Australian Lymphoma Leukaemia Group. He has experience in the design and conduct of several investigator led studies at TCH. Dr Pati chairs the lymphoma MDT streamlining the lymphoma care in ACT. Principal Investigator of many industries sponsored and cooperative group clinical trials and has served on pharmaceutical company advisory boards.

Professor David Perkins

David is the Director and Professor of Rural Health Research, Centre for Rural and Remote Mental Health at the University of Newcastle. David has extensive research experience in Mental Health Services, Rural Suicide Prevention, Public Health, Rural Health and Primary Health Care. His career spans senior management and health service research roles in both the UK and Australia.

Professor Daniel Rock

Daniel is a psychiatrist by training and epidemiologist with a PhD from the University of Western Australia. He is also a Fellow of the Royal Society for Public Health and an adjunct Professor at the UC Health Research Institute and at the School of Psychiatry and Clinical Neurosciences, University of Western Australia. He is the Principal Advisor & Research Director at WA Primary Health Alliance — WAPHA where he leads the mental health and suicide prevention strategic planning of Western Australia (WA) and participates as member in main governmental MH strategies in Australia such as Fifth National MH and Suicide Prevention Plan Technical Advisory Group, and the National Assessment, Triage and Referral Project Steering Committee, Department of Health, Canberra.

Professor Sebastian Rosenberg

Sebastian is Head of the Mental Health Policy Unit within the ANU's Centre for Mental Health Research, providing teaching and course development. He is also an advisor to the Universidad Loyola Andalucía on the Refinement-Spain Project in relation to mental health financing systems. He also works at the Brain and Mind Centre at the University of Sydney.

OUR PEOPLE IN 2022 (cont.)

Associate Professor Jose a. Salinas-Perez

Jose is an Associate professor at the Department Quantitative Methods, Loyola University in Spain. He is a geographer specialized in Health Geography. Thus, he developed his doctoral thesis on the design and implementation of a Multi-Objective Evolutionary Algorithm for carrying out spatial data analysis. The Algorithm has been applied on treated prevalence data, specifically on schizophrenia and depression, at municipal level to identify and locate spatial clusters of municipalities with significant high (hot spots) and low (cold spots) values of treated cases in Andalusia and Catalonia. Later the spatial clusters have been related with risk factors such as socioeconomic and health planning indicators to produce meaningful knowledge for health planning.

Dr Vicky Saunders

Vicky has a multidisciplinary background with qualifications in nursing and social work. Her research includes vulnerable populations with a specific focus on children and young people, Vicky completed her PhD (social work) at the Institute of Child Protection Studies, ACU in 2019. Her thesis examined children and young people's experience of parental incarceration in the ACT.

Professor Annette Schmiede

Annette is a well-established leader within Australia's health and aged care sectors through her leadership and governance roles across public and private healthcare, industry, education and health and medical research entities. Possessing a deep understanding of their policy settings, systems performance and funding models, gained through her roles as Executive Leader, Board Member, Investor and Consultant to industry, public and NFP organisations. Currently Annette is the Chief Executive Officer of the \$220million the Digital Health CRC which brings together a unique, multidisciplinary, collaborative taskforce of research, clinical, industry, government and educational organisations.

AFFILIATED MEMBERS

Dr Tesfaye Gebremedhin

Tesfaye Gebremedhin is an Assistant Professor of Economics at the Faculty of Business, Government and Law. Before this appointment, he held a lectureship position in economics at University of Sydney. Tesfaye's major research interests are in development economics, labor economics, applied microeconomics, Economics of education and health economics.

Dr Ro McFarlane

Ro is an Assistant Professor in Public Health at the University of Canberra. She has significant experience and expertise at the interface between health, biodiversity, environmental sustainability, and food production. This area is also known as One Health, EcoHealth, Planetary Health and Ecological Public Health. Her unique perspectives derive in part from her initial training as a veterinarian, and direct hands-on experience in primary production and natural resource management in marginal climatic and agronomic regions.

Dr Indira Samarawickrema

Indira is a public health physician turned academic with experience in Australia, USA and Sri Lanka. Her expertise includes applied epidemiology, health program management in prevention, promotion and policy; global health, health disparities, research supervision and clinical audits. She has wide experiences in analytical skills to identify patterns and discrepancies from data sets, using mixed methods, address complex issues with thorough and critical knowledge including problem and root cause analysis, developing strategies/ activities for prevention, mitigation and improvement using best practice analytical craft and implementation science while developing excellent relations with diverse stakeholders.

Professor Shaun Somerset

Shawn was Professor of Public Health and Professor of Nutrition and Dietetics in the Faculty of Health at the University of Canberra. He worked in government, industry, community and university sectors on food and nutrition-related projects in Australia, Europe, the Middle East and Asia.



**BUILD SUSTAINABLE
COMMUNITIES
THROUGH DEEP
COLLABORATIONS
THAT ARE LOCALLY
FOCUSSED AND
GLOBALLY RELEVANT.**



ACT AND REGION

**“WE PROUDLY EMBRACE
OUR ROLE AS THE
UNIVERSITY OF THE
NATION’S CAPITAL.”**



“We are focussed on strengthening our connections here in Canberra and the regions, however our impact and reach remain national. We understand our capital region, and we are also an outward-looking global institution.”



SELECTED RESEARCH PROJECTS

A GOOD START IN LIFE FOR OUR CHILDREN

A large body of research suggests that the first 1000 days of a child's life have a significant impact on their lifetime health and wellbeing. It is well known that children from disadvantaged environments, particularly those exposed to a range of early childhood adversities, are at increased risk for poor health including developmental delay, mental health problems, school failure and increased adult mortality and morbidity. This in turn, imposes significant, and increasing burden on health and societal cost.

While many children in Australian are progressing well, an increasing number are falling well below national benchmarks. For example, in the Australian Capital Territory over the past decade there has been a significant increase in the proportion of children classified as 'developmentally vulnerable' and this disparity varies quite markedly geographically.

The 'Good Start in Life' project aims to evaluate the outcomes and processes related to a multisector, multicomponent program of specific targeted programs and supports designed to integrate existing child and family services within the Belconnen community. This program of support and connection aims to provide the best start in life for children (birth-5 years) and their families in the Belconnen community.

A range of place-based services and activities are offered as part of the 'Good Start in Life' project to support ECEC centres, playgroups and families in the target Belconnen suburbs. These included the following:

GOOD START IN LIFE ACTIVE PLAY

The Good Start in Life Active Play programme provided training to early childhood educators to enable them to feel confident to promote active play and teach fundamental movement skills to 3–5 year-old children.

OUTREACH ALLIED HEALTH

Clinical educators and their students in occupational therapy, speech pathology and health undertook their placements in ECEC centres and playgroups in the target suburbs, providing directors and educators, playgroup coordinators and families with information, as well as support and mentoring to recognise potential developmental delays and to promote access to community and health services available in Belconnen.

The project team has 2 occupational therapists and 2 speech pathologists who can provide workshops and on-site coaching to ECEC centre directors and educators.

RESEARCH TEAM

RACHEL DAVEY

ANTONIA KISH

MICHELLE LINCOLN

JACQUI MCKECHNIE

CATE HILLY

JONATHAN RAMKE

VIVIAN YU

CHRISTINE PHILLIPS

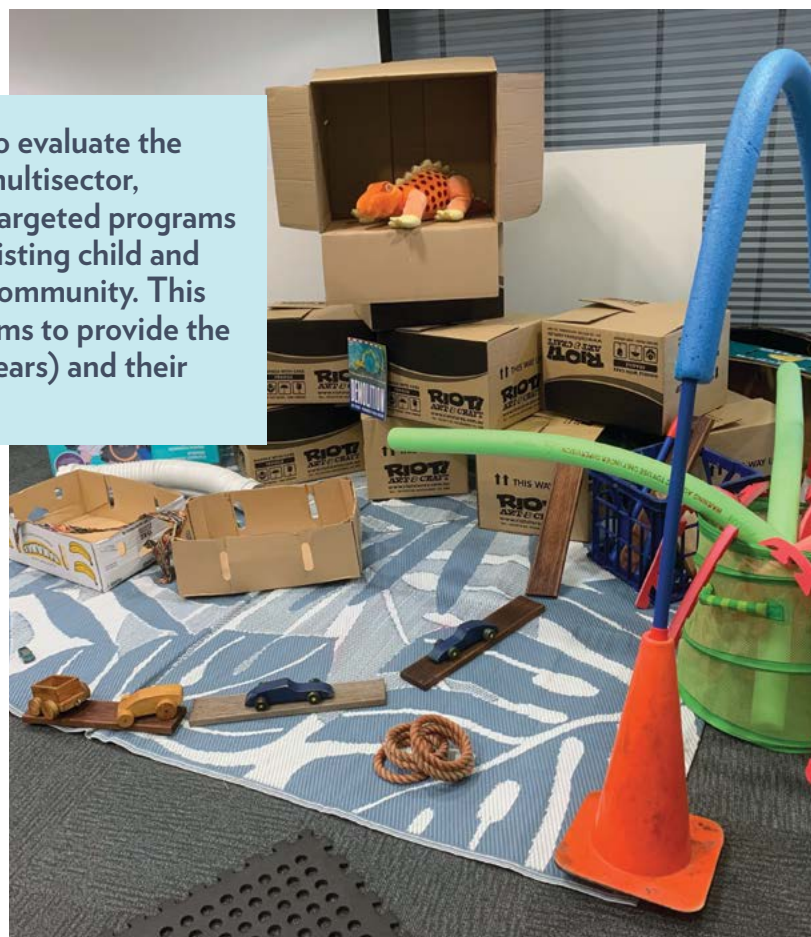
JANE HERBERT

TONY OAKLEY

VICKY SAUNDERS

SUSIE GIUGNI

FUNDED BY THE
MEDICAL RESEARCH
FUTURE FUND



SELECTED RESEARCH PROJECTS



LOOSE PARTS PLAY 'POP UPS'

A series of “pop up” loose parts play sessions were held at Belconnen parks with supporting attendance from speech pathology and occupational therapy students. Loose parts play involves providing children with open-ended materials to stimulate their creativity and imagination. These sessions were successful in engaging local families, promoting strategies to support children’s development, and linking parents and caregivers with services.

As mentioned above, there was a significant increase in the percentage of children developmentally vulnerable on one or more domain(s) in Belconnen between 2018 and 2021 from 26.4% to 30.5%. However, of the 9 Belconnen target suburbs used in the ‘Good Start in Life’ project, 6 saw a decrease in the percentage of children developmentally vulnerable over this time. These decreases in developmental vulnerability were statistically significant in Hawker, Latham, McKellar and Scullin. This is possibly an early indication of the progress that the ‘Good Start in Life’ programs are making in improving outcomes for local children.

PUBLICATION 2022

Saunders V, Beck M, McKechnie J, Lincoln M, Phillips C, Herbert J, et al. (2022) A Good start in life: Effectiveness of integrated multicomponent multisector support on early child development—Study protocol. PLoS ONE 17(8): e0267666. <https://doi.org/10.1371/journal.pone.0267666>

FAMILY AND COMMUNITY LIAISON COORDINATOR

The family and community liaison coordinator worked with families to provide support in accessing and navigating the often-complex system of health and community services available.

The coordinator formed relationships with key support services and created a “directory of services” that could be easily shared with ECEC centre directors, educators, and playgroup coordinators when they had questions or concerns about children’s development. In addition, the coordinator was available to attend staff meetings or mentor individual staff to share the information from the AEDC data and the supports the project was able to offer.

REDUCING THE RISK OF REPEAT STROKES WITH CARDIOVASCULAR REHABILITATION

Cardiovascular disease, which includes stroke and heart disease, is the biggest killer in Australia. One third of strokes are repeat events. These repeat strokes are more likely to result in death and are costly, for individuals, families and the healthcare system.

Exercise-based cardiac rehabilitation is a well-established and widely available secondary prevention program that reduces disease risk and death from heart disease and could help prevent repeat strokes as both share similar risk factors, such as physical inactivity, high blood pressure and poor diet. However, our research has found that less than 2% of Australian cardiac rehabilitation programs include people with stroke.

Associate Professor Nicole Freene and her research team from the Health Research Institute have partnered with Canberra Health Services and Calvary Public Hospital, supported by the Stroke Foundation and the Heart Foundation, to investigate the effectiveness of a 6-week integrated (transient ischaemic attack (TIA), mild-stroke, heart disease) exercise-based cardiac rehabilitation program (Cardiovascular Rehabilitation, CVR) at the UC Health Clinics.

The hybrid effectiveness-implementation trial is being conducted over 2-years, recruiting 140 adults living in Canberra who have had a TIA or mild-stroke within the last 12-months. The study commenced in April 2022, and we have currently recruited 48 people. Participants are being randomised to the intervention (CVR) or 6-month wait-list control group. Functional exercise capacity (distance completed in the 6-minute walk test) is the primary outcome.

Outcome measures are being collected at baseline, 6-weeks (complete CVR) and 6-months and include unplanned cardiovascular disease related emergency department and hospital admissions, daily minutes of accelerometer moderate-to-vigorous physical activity, body mass index, waist circumference, blood pressure, quality-of-life, anxiety and depression. Qualitative and cost-effectiveness analyses will also be completed. If successful, the results will guide future research, policy and practice, potentially reducing the risk of repeat strokes. By reducing the risk of further strokes through the use of existing cardiac rehabilitation programs, we aim to help more Australians live longer and better after TIA and mild-stroke and avoid hospital readmissions.

PUBLICATION IN 2022

Freene N, Wallett H, Flynn A, Preston E, Cowans S, Lueck C, Niyonsenga T, Mohanty I, Davey R. Cardiovascular Rehabilitation for transient ischaemic Attack and Mild Stroke: the CRAMS effectiveness-implementation hybrid study protocol. BMC Health Services Research 2022. Doi: [10.1186/s12913-022-08797-3](https://doi.org/10.1186/s12913-022-08797-3)

RESEARCH TEAM

NICOLE FREENE

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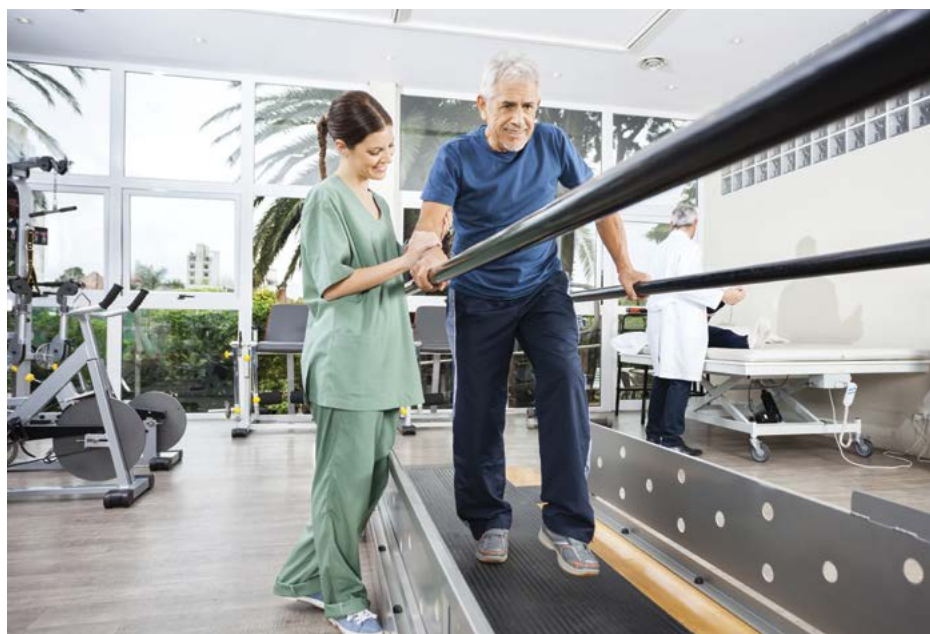
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THEO NIYONSENGA

ITISMITA MOHANTY

RACHEL DAVEY

FUNDED BY AUSTRALIAN CAPITAL TERRITORY HEALTH RESEARCH AND INNOVATION FUND GRANT



LIVING WELL IN THE ACT

RESEARCH TEAM

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KIMBERY BROWN

FUNDED BY THE ACT
GOVERNMENT AND THE
MEDICAL RESEARCH
FUTURE FUND

Our mission is to support research that improves the wellbeing and quality of life of people living in the ACT region.

The Living well in the ACT region survey examines wellbeing and quality of life in the Australian Capital Territory and surrounding areas of New South Wales. First conducted in 2019, the survey aims to provide information that can be used to better understand how the wellbeing of people in the ACT region is influenced by the many social, economic and environmental factors.

Since 2019, the wellbeing of Canberrans has been challenged by multiple events, including bushfire, pandemic and severe storms. Our research examines how the wellbeing of Canberrans changed between 2019 and 2021, using data from the University of Canberra's Living Well in the ACT Region survey.

Survey data are used to examine a number of wellbeing indicators from the ACT Wellbeing Framework, including personal wellbeing, access and connectivity, nature connection, health, identity and belonging, living standards, safety, social connection and time use.

PUBLICATIONS 2022

Living well in the ACT region: The changing wellbeing of Canberrans during 2020 and 2021. Report published July 2022 for the ACT Government.





SOCIAL WORK IN GENERAL PRACTICE

Social determinants of health are frequently identified as a significant barrier to accessing and navigating health and social services. The integration of multidisciplinary patient care within a primary care setting has been identified as an opportunity for increasing primary care capacity to deliver high-quality services at the right time and place in a person-centered approach, contributing to reduced health care costs and improving health outcomes.

The ACT Primary Health Network (ACTPHN), Capital Health Network (CHN) identified through their 2019–2020 Annual Needs Assessment 2021–2024 that approximately 52.3% of adults living in the Australian Capital Territory (ACT) report having a long-term health condition and that social determinants of health play a significant role in health and social services access in the ACT region. The exploration of possible solutions to addressing complex care issues and improve access to services across the health and social services sphere in the ACT is a priority for the ACTPHN. Social Workers in General Practice (SWiGP) is a pilot program being delivered

across four General Practices in the ACT, aimed at exploring the integration of Social Workers into a primary care setting. The goal is to assess the impact on efficiency and effectiveness of this approach in an ACT context and the impact that the program has on patients, practices and the associated primary health workforce.

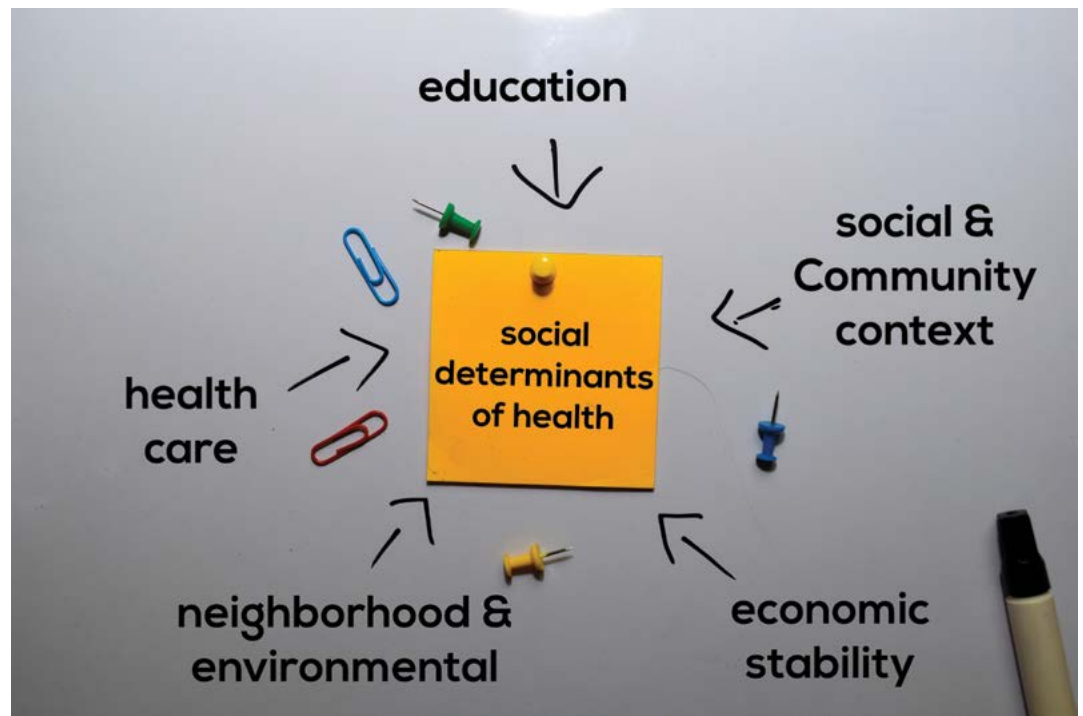
In the Australian context, there is a growing interest in exploring how models of integrated and multidisciplinary care provided in a primary care setting. The Australian Government has highlighted this as a priority for policy development over the next ten years (see Future Focused Health Care: Australia's Primary Health Care 10-year Plan: 2022–2032; Australian Government Department of Health), identifying possibilities for funding reform to incentivise multi-disciplinary team-based approaches and address gaps in care for population groups at risk of poorer outcomes.

RESEARCH TEAM

ANDREA GLEDHILL
RACHEL DAVEY

FUNDED BY THE CAPITAL
HEALTH NETWORK

SELECTED RESEARCH PROJECTS (cont.)



Funded by the ACTPHN, four General Practices (Interchange Health Co-Op — Tuggeranong, Next Practice — Deakin, Fisher Family Practice — Fisher and Wakefield Gardens — Ainslie) will employ social workers to provide an integrated social work service to patients of these practices across an 18-month period — with the intention of allowing time to develop and evaluate service delivery models that meet the needs of the practice population, as identified by the individual practices. HRI have been engaged by the ACTPHN to complete an evaluation of the SWiGP program in conjunction with each of the practices, social workers and identified general practice leads for the program at each location.

The addition of dedicated psychosocial care, care coordination and case management within a primary care setting may have a broad range of applications including cancer, chronic conditions (arthritis, heart disease, diabetes and others), chronic pain, Post Traumatic Stress Disorder (PTSD), low acuity substance use disorders, as well as transition of life stages and other socio-economic concerns that may impact overall wellbeing and patient activation with medical care. The social worker will work within identified needs of the patient cohort in each of the practice settings to improve access to support patients with facilitated service navigation to broader community services and support systems and the application of integrated care to support these biopsychosocial needs. Social workers will work within their current scope of practice as outlined by the Australian Association of Social Workers.

The aim of the SWiGP program is to improve how primary care supports consumers who are identified as having non-medical areas of need, which that are otherwise challenging to address through stand-alone primary care services.

IMPROVING THE QUALITY USE OF MEDICINES IN RESIDENTIAL AGED CARE IN THE ACT

INTEGRATING PHARMACISTS INTO RESIDENTIAL AGED CARE FACILITIES TO IMPROVE THE QUALITY USE OF MEDICINE (PIRACF) STUDY

The Pharmaceutical Society of Australia's 2019 Medicine Safety: Take Care report found that every year 250,000 Australians were hospitalised and a further 400,000 presented to emergency departments because of prescription errors, inappropriate use, misadventure and adverse interactions with medications. Medicine safety in aged care is a national priority.

Medicine related problems experienced by older people living in residential aged care facilities (RACFs) were also highlighted by the Royal Commission into Aged Care Quality and Safety, which concluded its findings in 2021.

'We also heard about incorrect administration of medicines, and of poor prescribing and dispensing practices. These included overuse of medication in lieu of more suitable treatments, and the prescription of medications that have negative interactions with each other.'

Royal Commission into Aged Care Quality and Safety 2021 Final Report: Care, Dignity and Respect Vol 1, page 27.

Involvement of allied health professionals, including pharmacists, are recommended to improve resident's care.

About the study

Older adults living in residential aged care have complex healthcare needs, including multiple comorbidities, and are prescribed many medications. Numerous studies report high rates of inappropriate prescribing and medicine use, leading to adverse health outcomes for residents. Addressing medication management and safety is identified as a priority in aged care.

Main aims of the study

The on-site pharmacist model aims to **improve:**

- ↑ appropriateness of prescribing and management of medicine
- ↑ health and wellbeing of residents
- ↑ upskilling and awareness of medications management with RACF staff and residents, families and carers

Reduce:

- ↓ medicine related adverse health outcomes
- ↓ emergency department presentations and unplanned hospital admissions
- ↓ psychotropic medicines and chemical restraints
- ↓ workload for RACF staff

RESEARCH TEAM

SAM KOSARI

MARK NAUNTON

RACHEL DAVEY

JANE KOERNER

FUNDED BY CAPITAL HEALTH NETWORK

We have implemented on-site pharmacists across the Australian Capital Territory in 20 of 27 RACFs.

RECOMMENDATION 38:

RESIDENTIAL AGED CARE TO INCLUDE ALLIED HEALTH CARE

To ensure residential aged care includes a level of allied health care appropriate to each person's needs, the System Governor should, by no later than 1 July 2024:

- | | |
|---|---------------------|
| a. require providers to have arrangements with allied health professionals to provide services to people receiving care as required by their assessment or care plan | Commissioner Pagone |
| b. require approved providers to: | |
| i. employ, or otherwise retain, at least one of each of the following allied health professionals: an oral health practitioner, a mental health practitioner, a podiatrist, a physiotherapist, an occupational therapist, a pharmacist, a speech pathologist, a dietitian, an exercise physiologist, and a music or art therapist | Commissioner Briggs |
| ii. have arrangements with optometrists and audiologists to provide services as required to people receiving care | |

Source: *Royal Commission into Aged Care Quality and Safety 2021 Final Report: Care, Dignity and Respect Vol 1, page 235.*

SELECTED RESEARCH PROJECTS (cont.)

New model of care

On-site pharmacists, employed by and integrated into facility staff teams are proposed as a model to enhance medication management and improve resident-centred multi-disciplinary care.

On-site pharmacists assist RACF care staff to provide resident-centred care, liaise with health care professionals, provide advice and education, and contribute to medication management policies and procedures.

Pharmacist activities

Registered pharmacists are employed in RACFs and conduct resident level and facility level medication management activities that are within their current scope of practice.

Activities include, but are not limited to:

- Auditing resident's use of psychotropics, polypharmacy, opioid, and antimicrobial medicines.
- Reviewing resident's medicine and advising on therapeutic management, while involving residents, family and carers.
- Daily communication with the RACF care team.
- Regular discussions with residents, families and carers about safe medicine use.
- Providing education for RACF staff, residents with families and carers.
- Regular liaison with GPs and prescribers, allied health professionals, and community and hospital pharmacists.
- Timely response to medicine related adverse events.
- Contributing to medication management policies and procedures and undertaking quality improvements, such as reviewing medicine related incidents and falls.

Benefits to residents

“Very important [to have on-site pharmacist in RACFs] because of my own experience. I mean we’re all – I’m 93 years of age and possibly others down the stairs in the hundreds. We don’t have knowledge of these things. And if something occurs, we want to know what it is. It’s just we’re relying on her knowledge and she helps a great deal.”

Resident

“I’m actually surprised that it hasn’t happened before. I mean, <laughs> we’re new in aged care facilities anyway, because my father’s only been there for a relatively short period of time, but I guess I’m surprised that there wasn’t an on-site pharmacist before. So, to me, that would be an important person to have in the team of professionals who are in the aged care.”

Family member

Benefits to RACF care teams

“I think they should have the pharmacist on-site because like all: the manager, registered nurse, carer, they do different kinds of jobs. So, if we do have problems with the medication, and the pharmacist is on-site, it’s a really, really quick person to solve that problem which will help us with workload on the floor.”

RACF staff member

Benefits of having the on-site pharmacist

“I feel like the medication reviews are an added bonus in a way. They just haven’t had that before in that way. They would just get done through the normal RMMR process. It’s basically a case of anytime a medication issue comes up, ‘Oh the on-site pharmacist will look at that’.

On-site Pharmacist

“I had a resident last week or the week before, that my boss just offhandedly said, ‘Oh, she’s self-medicating, can you just have a look at it? It shouldn’t take you long, it should take you ten minutes, just double-check.’ It turned out to be a massive problem... So, since I stopped her being self-medicated, she hasn’t had any falls, so she’s actually getting what she should have, so that’s been really nice.”

On-site Pharmacist

Benefits to RACFs

Increased organisational and systems capacity to enhance the health and wellbeing of residents through better medication management and upskilling of the aged care workforce with adoption of innovative service models. Potential cost-savings from reduced adverse medicines, increased efficiencies and better care delivery and resident satisfaction.

“I’ve been in aged care for 15 years now, and having that pharmacist here has just made such a big difference to how we’ve been able to manage our medications.”

RACF manager



Training and workforce development

We have developed education resources in partnership with the Pharmaceutical Society of Australia to train on-site pharmacists in undertaking their new role.

We have also developed a toolkit and resources for RACFs including information for residents, families and carers that helps them understand how to integrate the pharmacist into the facility and the activities that the pharmacist can assist with.

PUBLICATIONS IN 2022

Haider I, Kosari S, Naunton M, Niyonsenga T, Peterson GM, Koerner J, Davey R. Quality Use of Medicines Indicators and Associated Factors in Residential Aged Care Facilities: Baseline Findings from the Pharmacists in RACF Study in Australia. *Journal of Clinical Medicine*. 2022; 11(17):5189. <https://doi.org/10.3390/jcm11175189>

Haider I, Naunton M, Davey R, Peterson GM, Baqir W, Kosari S. How Do Pharmacists Practice in Aged Care? A Narrative Review of Models from Australia, England, and the United States of America. *International Journal of Environmental Research and Public Health*. 2021; 18(23):12773. <https://doi.org/10.3390/ijerph182312773>

AN EXPLORATORY INVESTIGATION INTO THE IMPACT OF THE COVID-19 PANDEMIC ON MODE OF SERVICE DELIVERY

RESEARCH TEAM

VINCENT LEARNIHAN
MARCUS BLAKE

FUNDED BY ILLAWARRA-SHOALHAVEN LOCAL HEALTH DISTRICT

In 2022, the Australian Geospatial Health Lab (AGeoH-L) partnered with Illawarra Shoalhaven Local Health District (ISLHD) as part of a Collaborative Health Professional Research Grant investigating the role of telehealth in speech pathology service delivery.

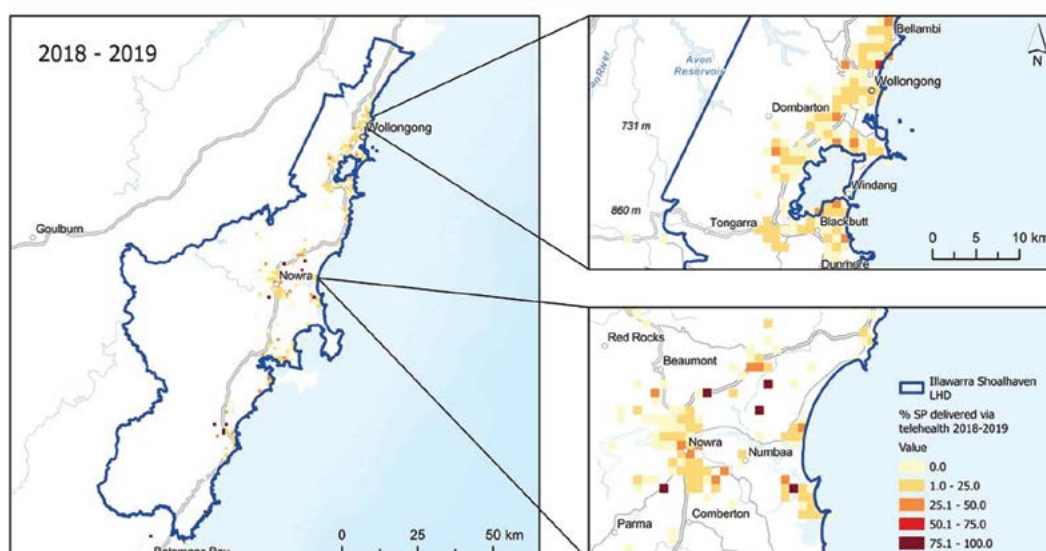
ISLHD has a catchment of over 400,000 people including the local government areas of Wollongong, Kiama, Shellharbour and Shoalhaven. It currently operates eight hospital sites and provides community health services from approximately 58 locations across the region. ISLHD staff and services were considerably impacted by the COVID-19 pandemic with non-urgent elective surgeries postponed across different hospitals for certain periods to ensure staff and resources could be prioritised across the district.

ISLHD scaled up speech pathology telehealth services to include videoconferencing to meet the needs of the local population during the COVID-19 pandemic. AGeoH-L worked with ISLHD including health clinicians to examine

outpatient data in the two years prior to (2018 and 2019), and during the COVID-19 pandemic (2020 and 2021). Exploratory geospatial mapping was undertaken and shared to provide insights into who, where and how speech pathology services were being provided in the ISLHD. Monitoring changes in mode of service delivery included identifying the rapid uptake of telehealth services in 2020 and examining differences in service utilisation across demographic groups based on age, sex, indigenous status, remoteness and socioeconomic disadvantage.

Building on AGeoH-L's expertise in geospatial mapping and analysis, this collaboration aimed to provide a clearer picture of speech pathology service provision in the region. AGeoH-L and ISLHD continue to work together on input into future strategies focused on the provision of virtual care more widely, informed by characteristics of the target population, consumer preferences and barriers to access and provision of telehealth services.

Proportion of speech pathology telehealth services delivered per 1km grid across ISLHD.





MEASURE IT! UC RESEARCHER RECEIVES GRANT TO IMPROVE PHYSICAL ACTIVITY IN HEART PATIENTS



Associate Prof Nicole Freene will investigate whether a brief intervention can increase the physical activity levels of cardiac rehabilitation patients, making them less susceptible to a repeat heart attack and reducing the load on an overburdened hospital system.

The Measure It! trial, headed by Associate Professor Dr Nicole Freene, has been awarded a research grant from the Medical Research Future Fund (MRFF) Cardiovascular Health Mission scheme.

The trial is a collaboration between the University of Canberra, Queensland University Technology, the Australian National University, the University of Sydney and Monash University.

The trial will gauge the effectiveness of the intervention which is based on wearable activity tracker steps and a quick conversation; designed to be viable for both patients and health professionals, it also empowers patients to take greater charge of their own health.

For people with heart disease, insufficient physical activity is a risk factor for all causes of death.

However, Dr Freene says that only 15 per cent of those attending cardiac rehabilitation — which means they already have heart disease — actually achieve the physical activity levels recommended by health guidelines.

It's a common problem Dr Freene has observed in the 25 years she has worked as a clinician in the field.

“Basically, the more physically active you are, the more your chances of having a heart attack are reduced,” she said.

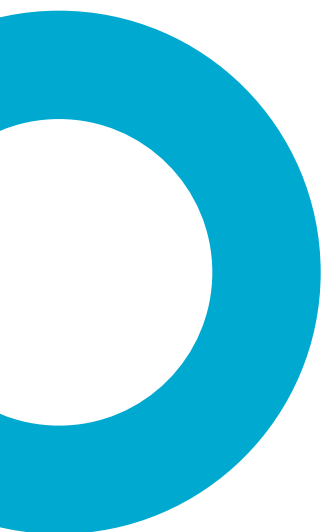
“We would get people coming in for a cardiac rehab program — which is typically between six to 12 weeks, two sessions a week — and in between sessions and after finishing the program, they were not necessarily as active as they should have been.”

RESEARCH TEAM

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RACHEL DAVEY
STEVEN MCPHAIL
ZEPHANIE TYACK
BREA KUNSTLER
THEO NIYONSENGA
WALTER ABHAYARATNA
ROBYN GALLAGHER
RICHARD KEEGAN

FUNDED BY THE
MEDICAL RESEARCH
FUTURE FUND

SELECTED RESEARCH PROJECTS (cont.)



A pilot study conducted by Dr Freene found that if physical activity was regularly measured by a health professional, that was enough to drive people to adhere to the physical activity guidelines.

“However, having sufficient time to do this and promote physical activity has always been the major stumbling block for clinicians,” she said.

And in cardiac rehabilitation, health professionals focus on aerobic fitness — measured differently to physical activity — even though they do encourage patients to lead an active lifestyle.

“They are not the same things — physical or aerobic fitness is only one component of leading a physically active life,” Dr Freene said.

With a time-poor sector in mind, the Measure It! intervention was developed to take clinicians less than five minutes per patient.

It combines self-reporting with the objective measurement of data recorded by a wearable activity tracker, followed by advice on how to increase physical activity.

“That self-reporting aspect empowers the patient, but also makes them consider what kind of physical activity they incorporate into their lives,” Dr Freene said.

“And in our pilot study, we found that measuring something tended to validate and emphasise its importance — ‘if you measure it, it must matter’ seems to be the prevailing feeling, hence the use of the activity tracker.”

The study will run over 24 weeks, with 190 participants recruited from five cardiac rehabilitation programs in the ACT and NSW.

“At the end of the study, we will analyse whether the intervention has indeed increased physical activity and how it could routinely be implemented into cardiac rehab,” Dr Freene said.

“Measure It! has the potential to drive changes in the way cardiac rehabilitation is delivered, in a way that is both time- and cost-effective.

“We just want to help people to lead more physically active lives — which leads to greater quality of life and longevity, improved recovery and better physical and mental health outcomes. It also lessens the likelihood of ending up in hospital because of a chronic illness like heart disease, and that will ultimately reduce the strain on our hospital system.”





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CANBERRA HAS BUILT
THE FOUNDATIONS OF A
WORLD-CLASS UNIVERSITY
AND IS RECOGNISED BOTH
NATIONALLY AND GLOBALLY
FOR THE QUALITY OF
OUR EDUCATION AND
RESEARCH.**

NATIONAL BEST PRACTICE UNIT TACKLING INDIGENOUS SMOKING

RESEARCH TEAM

PENNEY UPTON

SUNIL GEORGE

RACHEL DAVEY

FUNDED BY THE
COMMONWEALTH
DEPARTMENT OF HEALTH



Penney Upton and Sunil George with members of the NBPU TIS consortium.

We are delighted to open this update with some exciting news: this year HRI received a further four years of funding (July 2022 June 2026) to continue the essential work we do as part of the National Best Practice Unit Tackling Indigenous Smoking (NBPU TIS).

This is the third successful tender won by the NBPU TIS consortium, meaning we have been continuously funded by the Australian Government Department of Health and Aged Care since 2015 to provide tailored support to the 41 community-based teams funded under the national Tackling Indigenous Smoking (TIS) program.

What a year 2022 has been! With internal borders once again open, and not knowing in January whether or not we would be refunded, we spent the first half of the year delivering face to face workshops to all 41 teams. In what we thought might have been our last hurrah, we spent quality time with the teams looking back at program successes highlighted by evaluation findings, and looking forward to what should come next if the program were to be refunded. It was really exciting to hear the ambition and determination of the teams to implement activities in partnership and collaboration with others to further reduce smoking rates in their communities. Many felt the

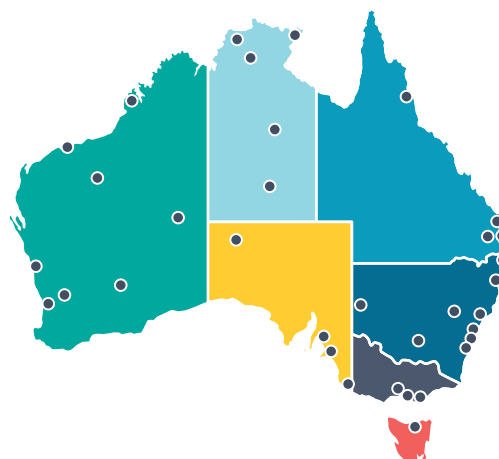
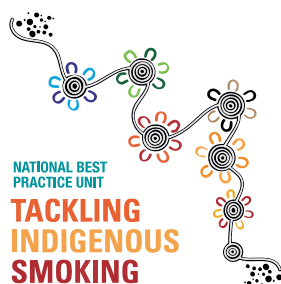
2015–present

41

Indigenous
Organisation across
Australia

CONSORTIUM
NINTI ONE LTD

HEALTH RESEARCH INSTITUTE UC
EDITH COWAN UNIVERSITY





Population Health Promotion
for TIS



CQI for TIS



National Preventative Health Strategy target to 'reduce the daily smoking rate among Aboriginal and Torres Strait Islander people (≥ 15 years) to 27% or less by 2030' was too conservative and wanted to set their own target of 'zero by 2030'!

Alongside this whirlwind of workshops, we continued providing advice to the Department of Health and Aged Care, responding to relevant policy consultations, attending conferences, and delivering bespoke training to build TIS teams' capacity on a wide range of topics from evidence-based practice in Indigenous tobacco control, through monitoring and evaluation, to population health promotion. This year we also established two online training programs (population health promotion and continuous quality improvement) so that teams are able to keep their skills up to date. This approach to developing tailored and accessible online training programs is something we hope to build on over the next four years (for more details see <https://nbpu-tis.thinkific.com/courses/population-health-promotion-for-tis>).

It really has been a great year for resource development. Last year we highlighted two separately funded Indigenous tobacco control projects that NBPU TIS were engaged in, both of which are now complete and have resulted in two very important resource packages:

- The 'Keep our place a smoke-free space' initiative was a collaboration with the Office of the Registrar of Indigenous Corporations (ORIC). Working with Aboriginal and Torres Strait Islander businesses across the country, we were able to co-design a best practice guide to developing and reviewing smoke-free workplace policies. Resources to support this process include policy templates, workshop materials, marketing collateral and practical resources to support the workforce to be smoke-free. These resources will be available on the TIS website as well on ORIC's own learning platform by the end of the year.

In this way we hope to enable the widest possible dissemination and use of these vital resources. Since over 3,000 organisations are registered with ORIC and not all of these organisations implement smoke-free policies in their workplace, raising awareness of the importance of a smoke-free workplace to protect against the harms of second- and third-hand smoke has huge potential to foster TIS program outcomes.

- Perhaps one of this year's most downloaded resources was this information video voiced by the TIS program's National Co-ordinator Professor Tom Calma AO. This video was just one of the resources produced as part of the tailored information campaign developed in collaboration with TIS teams and the Therapeutic Goods Administration to support the introduction of new laws related to access to Nicotine Vaping Products (NVPs).
- Finally, we would like to introduce you to the newest member of the team: Connie the Clever Cockatoo. Connie is our evidence avatar who will be assisting us to deliver regular evidence updates to the TIS teams to support them in the development of tobacco control activities. Previously evidence updates have been shared within the NBPU TIS through an e-journal club. However as we move towards 2023 and a new and invigorated program, we feel the time is right for a new approach. Connie was thrilled to present her first Tobacco Control News Summary with key takeaway messages and tips for TIS teams in October 2022 and is looking forward to presenting another summary in December. Meanwhile we are looking forward to monitoring the impact of Connie on the teams' engagement with the emerging evidence and to the next few years of successful research translation and evidence-based Aboriginal and Torres Strait Islander tobacco control!



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CANBERRA'S HEALTH
RESEARCH INSTITUTE
IS BUILDING A
HEALTHIER FUTURE
FOR CANBERRA AND
THE WORLD.**

FIRST ATLASES OF HEALTH AND WELLBEING SERVICES BASED ON AN INDIGENOUS SOCIAL AND EMOTIONAL WELLBEING MODEL OF HEALTH, IN CAIRNS AND YARRABAH

In 2022 the UC HRI Mental Health Policy Unit, with the Jawun Research Centre at Central Queensland University, published *Integrated Atlases of Social and Emotional Wellbeing Services for Aboriginal and Torres Strait Islander Children and Youth in the discrete Aboriginal community of Yarrabah, and in Cairns*.

The Atlases used the Description and Evaluation of Services and DirectoriEs (DESDE) service classification instrument to describe the characteristics, availability and capacity of social and emotional wellbeing (SEWB) services for young Indigenous people in the two Far North Queensland regions. They provide, to our knowledge, the first standard comparative analysis of local support and care systems following a national Indigenous model of health, the SEWB model, and were the first use of DESDE specifically in this context. This model of health is essentially holistic, going beyond traditional Western concepts of physical and mental health and illness, and incorporating domains of country, culture, spirituality, community, family and kinship, mind and emotions, and body.

The Atlases comprise the service mapping component of the “Systems Integration to Promote the Mental Health of Indigenous Children and Youth” (SIP) project currently being undertaken by the Jawun Research Centre at Central Queensland University, in partnership with the Aboriginal Community Controlled Health Organisation (Gurriny Yealamucka) in Yarrabah, and an Indigenous community controlled youth organization (Deadly Inspiring Youth Doing Good-DIYDG) in Cairns. The SIP project aims to conceptualise, co-design and evaluate community-driven systems-level integration to promote the mental health and wellbeing of Indigenous school-aged children and

youth (5–18 years). It responds to the need to better understand the current complex network of mental health and SEWB services which are fragmented, difficult to navigate and underutilised by young Indigenous people. Numerous policy documents over many years, including the most recent Closing the Gap National Agreement have recognised and reiterated the legacy of colonisation and the need for a comprehensive network of community driven, culturally competent support for the health and wellbeing of Indigenous children and young people.

The DESDE instrument was identified and endorsed by SIP research partners as being the most appropriate method to measure the availability and characteristics of SEWB services following a review of all currently available tools. This was due to its systematic approach, and from the alignment of its principles, which are based on a whole systems or health ecosystems model, with the SEWB model, making it uniquely suitable for providing a description of the pattern of care following this model. DESDE was able to describe and evaluate a broad range of services including many, such as those supporting cultural engagement, or connection to Country, that would not typically be included in a directory of health services using a Western model of health.

Key factors in the development of the Atlases included the high level of engagement and collaboration between the research partners, which as noted previously, included local Indigenous organisations, and the respective communities throughout the process. The CQU team members were already well known and trusted in both communities through previous projects. Additionally, there was strong community commitment to improve SEWB outcomes through the project, reflected in their participation and contributions to interviews and

DEVELOPMENT OF AN ATLAS



SOCIOECONOMIC AND SOCIODEMOGRAPHIC CHARACTERISTICS IDENTIFIED AND MAPPED



SERVICES IDENTIFIED, INTERVIEWED AND CLASSIFIED ACCORDING TO MAIN TYPE OF CARE



ALPHA VERSION
Data gathering, coding and mapping



BETA VERSION
Present data to planners, check and adjust

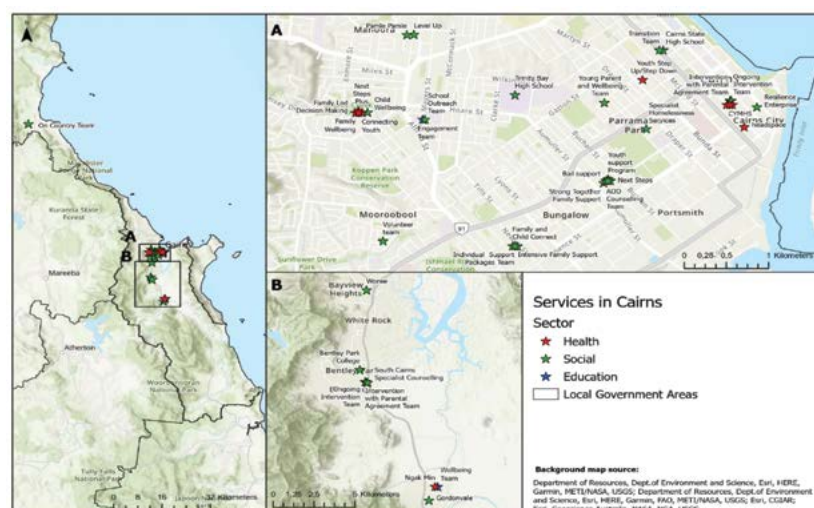


VERSION FOR COMMENT
To stakeholders for comment and review



FINAL VERSION

SELECTED RESEARCH PROJECTS (cont.)



Cairns Map of Services

discussions. Introductory sessions were provided in Cairns by the UC team with key personnel from Gurriny, DIYDG and the local communities, and data collected from service providers over the following 6 months by the UC and CQU research teams. Despite travel limits imposed by COVID restrictions, UC researchers were able to travel to the regions for initial training and interviews, otherwise participating by zoom or telephone. Preliminary data was reviewed and feedback was provided by research partners, and Community based knowledge sharing meetings were held with participating service providers, facilitated by community research partners. Findings were presented and discussed using a world café model centring around key points highlighted by each research partner. As a part of the process, each community prioritized the key points and ranked these in order of future research activities. This informed the codesign of priorities for service system improvements in each place, and their implementation and evaluation. The identification of an imbalance of service provision towards crisis driven downstream support, for example has led the communities to focus more strongly on the development of preventive services, particularly by Indigenous controlled organisations. An Integrated Atlas for each region which included local social, cultural, and demographic information was developed from the service data and endorsed by all partners.

The Atlases provided a picture of the services available, who they were, and what they were doing. The findings raised a number of issues and questions relevant to ongoing planning and delivery of Indigenous youth mental health and wellbeing services in these communities. They identified a highly complex system with an imbalance in the number and type of services available to young people that were provided by non Indigenous organisations, raising questions around accountability and capacity for self determination. They showed the critical role played by Aboriginal Community Controlled Organisations in Cairns and Yarrabah but the dominance of the mostly non Indigenous NGO sector; identified gaps and strengths in the pattern of care delivery and stimulated questions; and provided reflection about current progress towards key community and policy goals. Atlases represent one step in any evaluation of service systems and provide evidence to inform decision making and planning, and can be used as the necessary basis for further analysis such as of funding networks. The findings provide critically important baseline data to inform planning, and a foundation for further research, including follow up data at a later stage for the SIP project.

The Atlases were endorsed by all research partners and released through the Jawun Centre at CQU, and the MHPU at UC, and were launched by invitation at a national Indigenous Data Sovereignty Workshop in Cairns in November. A series of papers in collaboration with our research partners is planned, the first due for submission to Lancet Western Pacific shortly. Usability surveys sent to the research partners and to researchers working in related areas showed a high level of support for its usability in Indigenous services. An additional sub project is being undertaken by the CQU team specifically to evaluate the use of DESDE in an Indigenous context, a paper for which is also in preparation.

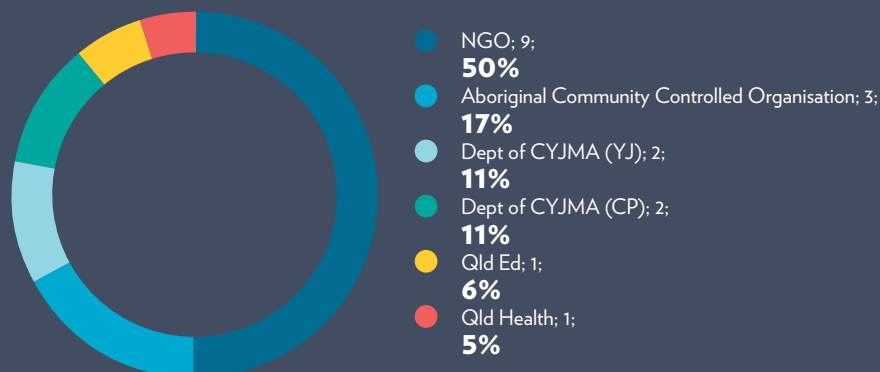


FIGURE 1. Social and Emotional Wellbeing services available to children and youth in Yarrabah according to type of provider delivering the service. Dept of CYJMA = Department of Child Protection, Youth Justice and Multicultural Affairs; NGO = Non Government Organisation

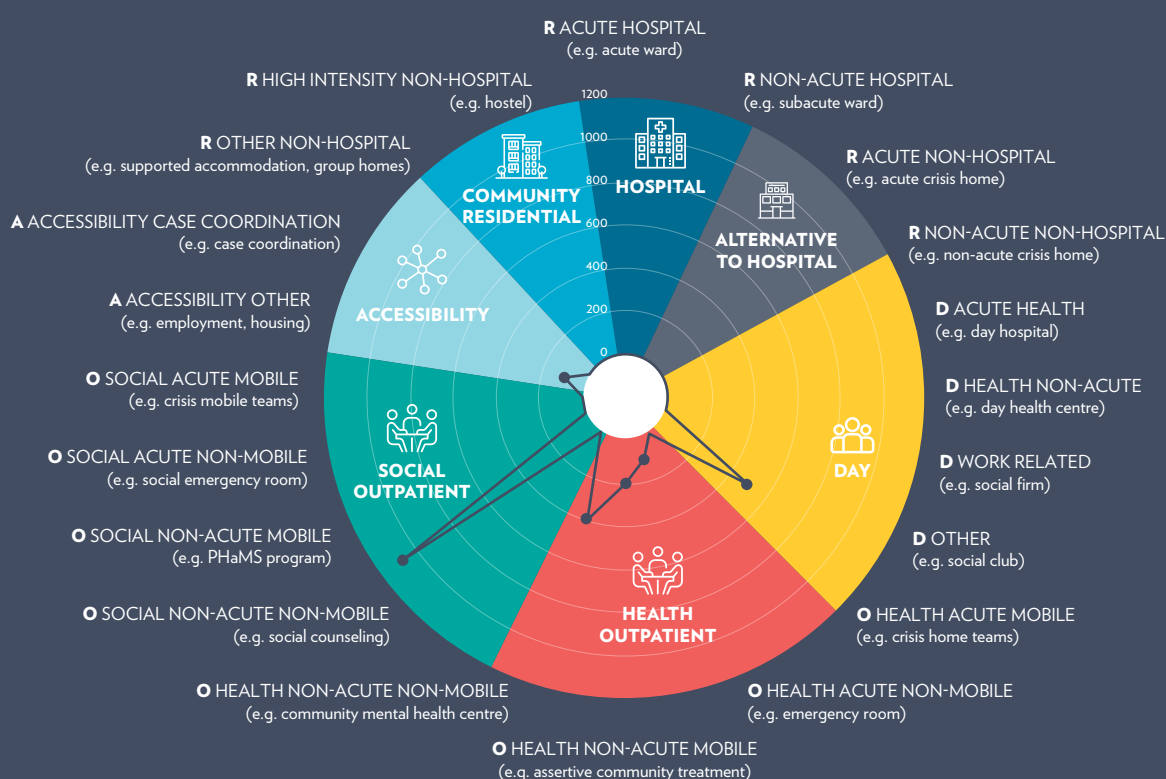


FIGURE 2. SEWB services for indigenous children and youth in Yarrabah. Availability of MTCs per 100,000 ATSI peoples (<18y.o.) Each coloured segment represents a different type of service. The points on the graph represent the number of different types of each type of care per 100,000 Aboriginal and Torres Strait Islander person under the age of 18 years in Yarrabah.

SELECTED RESEARCH PROJECTS *(cont.)*

**MENTAL HEALTH
POLICY UNIT**

RESEARCH TEAM

LUIS SALVADOR-CARULLA
NASSER BAGHERI
MARYANNE FURST
NEERAJ GILL
SUE LUKERSMITH
NICOLE O'CONNOR
KATIE SPEER
HOSSEIN TABATABAEI
CINDY WOODS

ADJUNCT STAFF

AMIR ARYANI
HAZEL DALTON
CARLOS GARCIA-ALONSO
DAVID PERKINS
DANNY ROCK
SEBASTIAN ROSENBERG
JOSE ALBERTO SALINAS
ANNETTE SCHMIEDE

VISITING RESEARCH FELLOWS

CARLOTA DE MIQUEL
DIEGO DIAZ-MILANES
IVAN DURAN-MALLOFRET

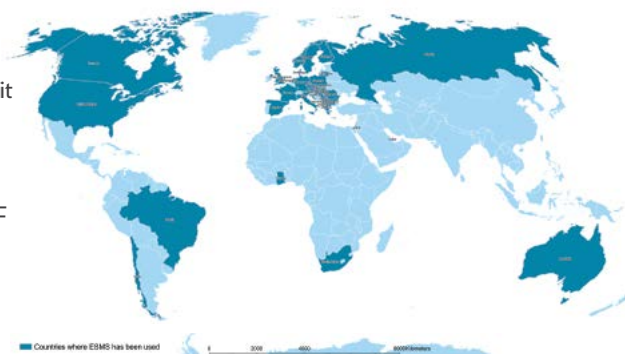
PHD STUDENTS

ROBERT HORSTEN
PETER MCGEORGE

Our aim: To improve decision making by using real world data and cutting edge tools.

GLOBAL APPLICATION OF OUR TOOLS

Tools developed by the Mental Health Policy Unit (MHPU) members are current used for research and health planning worldwide. The ESMS/ DESDE system for classifying and coding care services has been used in 35 countries. The GIAF toolkit for impact assessment is currently used in seven countries across the world¹.



1 Romero-López-Alberca C, *et al.* Eur Psychiatry. 2019;61:97-110.



1. Glocal (Atlases)

Evaluation of local and national patterns of health care to identify service gaps and unmet needs using an international service classification and coding system (ESMS/DESDE) developed by members of our team. GLOCAL is a global project gathering information on service availability, capacity and workforce in 35 countries. 21 Atlases of Health Care have been produced in Australia.

2. Visual analytics

Graphical representation of information and data to understand trends, outliers, and patterns in data and facilitate evidence informed decision making in the public and private health sectors.

We use advanced technologies and methodologies such as Ai, ML and geographical information systems (GIS).

3. Digital health

Better digital mental health systems in Australia and in Europe, including Apps, automated systems, digital navigation tools and platforms. EMPOWER is a European project aimed at developing a digital platform to improve well being and positive mental health in employees.

4. Modelling and benchmark

We have developed models for the analysis of efficiency and benchmarking of types of services. These models combine information on service availability from our atlases of health care with the use of services from routine databases.

Our models have been used to improve mental health planning and decision making in Australia, Chile, England, Finland and Spain.

5. Impact analysis

Over the last 10 years, we have developed and validated a model and toolkit to assess the process of implementation research — the Global Impact Analytics Framework and toolkit (GIAF). We have used the GIAF in numerous research projects in Australia (EdLinQ) and Internationally (Empower; Movember Veterans and First Responders mental health projects and grant program).

6. Value and human rights

Values of care and the promotion and protection of human rights are the ultimate goal of mental health reforms which should be intended to minimise coercion and enhance patient autonomy in agreement with the UN Convention on the Rights of Persons with Disabilities. We have collaborated in several projects with WHO and other international organisations. We are currently working with the state of Queensland to monitor the impact of revised *Mental Health Act 2016* and 1st *Human Rights Act 2019*.

OTHER KEY THEMES OF THE MHPU ARE: RURAL AND URBAN HEALTH, KNOWLEDGE TRANSFER AND DISSEMINATION

SELECTED RESEARCH PROJECTS (cont.)

VIDEA LAB

OUR LAB IS THE FIRST AUSTRALIAN LAB COMBINING EXPERTISE IN VISUAL AND DECISION ANALYTICS



A/Prof Nasser Bagheri
Head VIDEA Lab

Our vision: To place VIDEA at the centre of national and international visual and decision analytics. VIDEA is a hub that brings together researchers and decision makers from many disciplines to identify practical solutions to complex research questions in health policy for a better society.

The main activities of the VIDEA lab are:

VISUALISATION TOOLS:

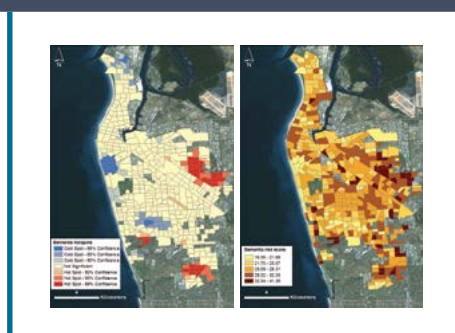
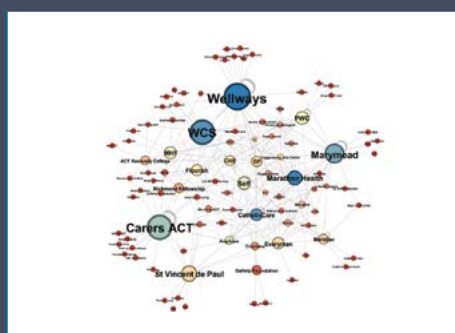
We are using new and advanced technologies and methodologies (e.g. AI, ML, GIS etc) with data science capacity to visualise pattern of chronic care including mental healthcare across communities.

DECISION ANALYTICS:

To generate evidence-informed knowledge in a way that captures the complex and dynamic nature of health and social problems and forecast the impact of alternative decision options before they are implemented in the real world.

GEOSPATIAL VISUALISATION:

We have extensive expertise in Geographical Information Systems (GIS) technology, medical geography and spatial epidemiology to support spatial decision making in health care across Australian communities.



CASE STUDY 1:

Connectivity pattern of psychosocial services in ACT using social network analysis²

CASE STUDY 2:

Use of the Expert-based Collaborative Approach (EbCA) to analyse comparative patterns of mental health care provision in different countries³

CASE STUDY 3:

Spatial patterns of dementia risk using GP practice data⁴

² Rosenberg *et al.* Mental Health Community Coalition ACT, 2021.

³ van Spijker *et al.* ANZJP, 2019. 10.1177/0004867419857809

⁴ Reference: Bagheri *et al.* JAD, 2018 10.3233/JAD-170079.



**#17 IN THE YOUNG
UNIVERSITIES WORLD
RANKING**

(THE, 2022)

**IN THE TOP 1% OF
YOUNG UNIVERSITIES
WORLDWIDE**

(THE YUR, 2022)

‘BIG DATA’

MAPPING THE BIGGER PICTURE

The premise may sound simple, but where we live is composed of a complex, intricate interplay of factors. Combining medical geography — via a powerful geographic information system (GIS), which captures and analyses spatial and geographic data — with a public health perspective, the Australian Geospatial Health lab can highlight the patterns at work in different areas and populations.

A partnership between the University of Canberra and worldwide geospatial industry leader ESRI, the lab analyses datasets simultaneously at area and individual levels to show the impacts of spatial variations which drive inequities in health outcomes.

HRI Director Professor Rachel Davey says that while Canberra has a very high socioeconomic status — because of the averaging of factors across the region — pockets of deprivation exist.

“These areas with a low socioeconomic status and poor health outcomes are almost ‘hidden’, and one of AGeoH-L’s latest projects is exploring this health inequity across Canberra,” she says.



Researchers at the AGeoH-L can drill down to pick apart tapestries of spatiotemporal data and analyse individual threads or weave them into multi-layered 3D visualisations.

Datasets can include satellite imagery, road networks and transportation grids, property values, crime and safety statistics and healthcare costs, among others.

Powered by cutting-edge digital health and geomatics technology, underscored by scientifically rigorous approaches and driven by a progressive, insightful team dedicated to life-changing research, the AGeoH-L is poised to be a digital health cartographer with the power to shape a more healthful future.



INFLUENCING PUBLIC HEALTH POLICY WITH LOCATION- BASED EVIDENCE

RESEARCH TEAM

NEIL COFFEE

MARK DANIEL

MARCUS BLAKE

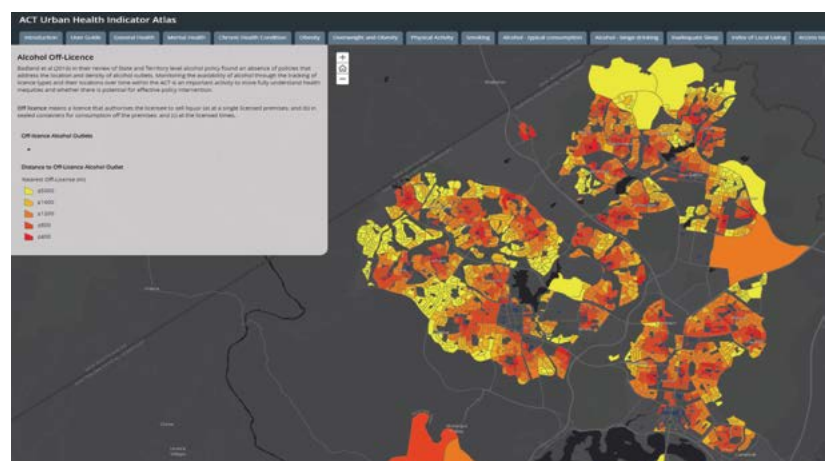
VINCENT LEARNIHAN

RALF SCHROERS

PHIL COOTE

VICTOR OGUOMA

The Australian Geospatial Health Lab fosters collaboration across research academics, local government, state government — anyone who's interested in understanding how health and place interact. GIS is the all-pervasive enabler that links everything together.





NOVEL MODELLING TO IMPROVE DECISION-MAKING FOR NEIGHBOURHOOD DESIGN TO REDUCE CHRONIC DISEASE RISK

RESEARCH TEAM

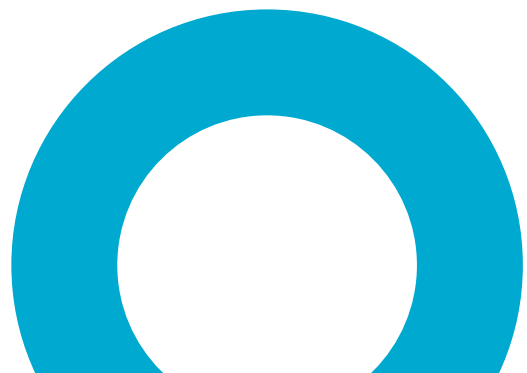
LUIS SALVADOR-CARULLA
GAVIN TURRELL
SUZANNE CARROLL
MARGARET CARGO
NASSER BAGHERI
KATIE SPEER
MARK DANIEL

FUNDED BY THE
NATIONAL HEALTH AND
MEDICAL RESEARCH
COUNCIL

Research on urban design that might support liveability and health (the 20-minute neighbourhood concept) has used analytic methods that do not account for the complexity of urban environments.

This study innovatively uses a flexible and applicable approach (Bayesian Networks) to show where neighbourhood features operate uniquely or not, which features can be prioritised, which are cost effective, and how much of each feature is needed to achieve improvement in reducing risk of chronic disease.

Using novel Bayesian Network analysis, we will develop a practical, user-friendly, generalisable and scalable tool to inform urban planning initiatives to help decision makers to prioritise initiatives for the greatest health and economic benefits in diverse neighbourhood types to prevent cardiometabolic risk and reduce health inequities.



GLOBAL IMPACT

**OUR RESEARCH IS
MAKING A DIFFERENCE
TO COMMUNITIES
ACROSS THE WORLD**





INTERNATIONAL CASE STUDIES



Researchers are undertake a two-year evaluation project with men's health international charity Movember to evaluate mental health initiatives for veterans and first responders.

Movember's Veteran and First Responder Mental Health Grant Program, in collaboration with The Distinguished Gentleman's Ride, is worth \$9 million in total and covers 15 projects across Australia, New Zealand, the United States, Canada, Ireland, Germany, and the United Kingdom. Researchers will examine the effectiveness, sustainability, and scalability of the 15 international projects, with a central focus on positive outcomes for participants. Professor Luis Salvador-Carulla from the HRI said his expert team would use innovative methods of analysis to look at the impact of the projects.

“Each of the projects has ambitious goals to improve the long-term mental health of every participant with real-world outcomes.”

Professor Salvador-Carulla

Director of the HRI, Professor Rachel Davey, said being selected as Movember's evaluation partner for this initiative was a big win for the University and would quickly establish the new team of researchers. “This evaluation process will identify and demonstrate effective prevention and early intervention programs for participants and will guide best practice for years to come,” Professor Davey said.

Movember was founded in Melbourne in 2003, and has since expanded operations in over 20 countries. It focusses on fundraising and building awareness around prostate and testicular cancers, as well as mental health and suicide prevention.

RESEARCH TEAM

LUIS SALVADOR-CARULLA
SUE LUKERSMITH
RACHEL DAVEY
CINDY WOODS
ITISMITA MOHANTY
THEO NIYONSENGA
NICOLE O'CONNOR
ANNETTE ERLANGSEN
PETER MCGEORGE
JOSE ALBERTO SALINAS-PEREZ

FUNDED BY MOVEMBER



INTERNATIONAL NETWORK – EXAMINING TRENDS IN PHYSICAL ACTIVITY PATTERNS AND HEALTH OUTCOMES IN YOUNG PEOPLE

The International Children's Accelerometry Database (ICAD) project is a consortium including 20 international partners which pooled physical activity (accelerometer) data using standardized methods. Data were processed to create comparable accelerometer variables in over 37,000 young people aged 3 to 18 years across studies from Europe, the US, Brazil and Australia.

Professor Rachel Davey, lead Chief Investigator for the UK CHAMPS (Children's Health and Activity Monitoring Program) says

"Pooling objective measurements of physical activity and accompanying physiological, demographic and health data from diverse studies in contrasting settings can optimise analytical power and provide new evidence on potential social, cultural and environmental influences on physical activity behaviour in children".

PUBLICATIONS IN 2022

Ikeda, E., Guagliano, J.M., Atkin, A.J. Davey R et al. Cross-sectional and longitudinal associations of active travel, organised sport and physical education with accelerometer-assessed moderate-to-vigorous physical activity in young people: the International Children's Accelerometry Database. *Int J Behav Nutr Phys Act* 19, 41 (2022). <https://doi.org/10.1186/s12966-022-01282-4>

Gammon C, Atkin AJ, Corder K, Ekelund U, Hansen BH, Sherar LB, Andersen LB, Anderssen S, Davey R, Hallal PC, Jago R, Kriemler S, Kristensen PL, Kwon S, Northstone K, Pate R, Salmon JO, Sardinha LB, VAN Sluijs EMF; International Children's Accelerometry Database (ICAD) Collaborators. Influence of Guideline Operationalization on Youth Activity Prevalence in the International Children's Accelerometry Database. *Med Sci Sports Exerc.* 2022 Jul 1;54(7):1114-1122. doi: 10.1249/MSS.0000000000002884. Epub 2022 Feb 21. PMID: 35195101; PMCID: PMC9208806.

PARTNERS

UNITED STATES

- National Health and Nutrition Examination Survey (NHANES)
- Trial of Activity for Adolescent Girls
- CHAMPS US (Physical Activity in Pre-School Children)
- Iowa Bone Development Study

BRAZIL

- Pelotas Birth Cohort

EUROPE

- European Youth Heart Study (Norway, Portugal, Estonia and Denmark)
- Personal and Environmental Association with Children's Health
- Project MAGIC (Movement and Activity Glasgow Intervention with Children's Health)
- ALSPAC (Avon Longitudinal Study of Parents and Children)
- SPEEDY (Sport Physical Activity & Eating Behaviour: Environmental Determinants in Young People)
- CHAMPS UK (Children's Health and Activity Monitoring Program)
- The Copenhagen School Children Intervention Study
- Belgium Pre-school Study
- Swiss Ballabeina Study
- Swiss Kinder-Sportstudie (KISS) Study

AUSTRALIA

- Project CLAN (Children Living in Active Neighbourhoods)
- Project HEAPS (Healthy Eating And Play Study)



**Understanding of
objective physical
activity tracking during
childhood is important
to predict PA behaviors
and design appropriate
interventions.**

INTERNATIONAL CASE STUDIES (cont.)



PROF LUIS SALVADOR-CARULLA MD, PHD
CHIEF INVESTIGATOR



EMPOWER

RESEARCH TEAM

SUE LUKERSMITH
LUIS SALVADOR-CARULLA
NASSER BAGHERI
TOM CHEN

FUNDED BY THE
EUROPEAN UNION'S
HORIZON 2020
RESEARCH AND
INNOVATION
PROGRAMME

The European platform to Promote Wellbeing and Health in the workplace (EMPOWER) is an European project to reduce the impact of mental health problems at the workplace funded by the European Union's Horizon 2020 Research and Innovation Programme

Mental health problems cause an enormous burden both for the individual and the society.

EMPOWER is a research and innovation effort, with an innovative pilot of implementation, that focuses on the development and implementation of a novel and low-cost eHealth platform to address mental health in the workplace from a multimodal perspective. It is a collaboration of researchers from psychology, medicine, sociology, public health, economics, ethics, law, and ICT technologies, and will rely on the participation of stakeholder groups, including employers and employees, insurance companies, individuals with mental health problems, unions and policymakers. The eHealth platform draws on previous national and international research innovation activities of the partners and is linked to other current initiatives.

The objective of EMPOWER is to develop, pilot and evaluate a cultural and gender-sensitive multi-modal and integrative eHealth platform compiling the most feasible, brief and cost-effective interventions currently available in Europe to promote health and wellbeing and prevent common mental disorders using a variety of strategies to reduce the negative impact of mental health problems in the workplace.

EMPOWER is an international collaboration of researchers from mental health, medicine, sociology, public health, economics, ethics, law, and ICT technologies, with partners from Spain, Italy, The Netherlands, Poland, UK, Switzerland and Australia.

PUBLICATIONS 2022

Rosenberg S, Salvador-Carulla L, Lukersmith S, Bagheri N. Digital mental health and employment — Lessons from the Australian experience. *European Journal of Psychiatry*, 37(1), 2022, 36–43. <https://doi.org/10.1016/j.ejpsy.2022.08.001>

Olaya B, Van der Feltz-Cornelis CM, Hakkaart-van Roijen L, et al. Study protocol of EMPOWER: A cluster randomized trial of a multimodal eHealth intervention for promoting mental health in the workplace following a stepped wedge trial design. *DIGITAL HEALTH*. 2022;8. doi:10.1177/20552076221131145

Renaldo M Bernard, Claudia Toppo, Alberto Raggi, et al. Strategies for Implementing Occupational eMental Health. *Interventions: Scoping Review*. *J Med Internet Res* 2022;24(6):e34479 doi:10.2196/34479

INTEGRATED PLANNING POLICIES CAN ENABLE HEALTHY AND SUSTAINABLE CITIES AROUND THE WORLD

IPEN is the International Physical Activity and the Environment Network with pooled data from over 15,000 adults across 17 cities in 12 different countries.

Research from the IPEN study has informed real-world application of integrated city planning policies to harness economic, environmental, social, and health benefits for all.

Professor Rachel Davey is lead Chief Investigator for the UK says “This seminal international study has informed evidence-based international and country-specific physical activity policies and interventions to help prevent obesity and other chronic diseases that are high in developed countries and growing rapidly in developing countries”.

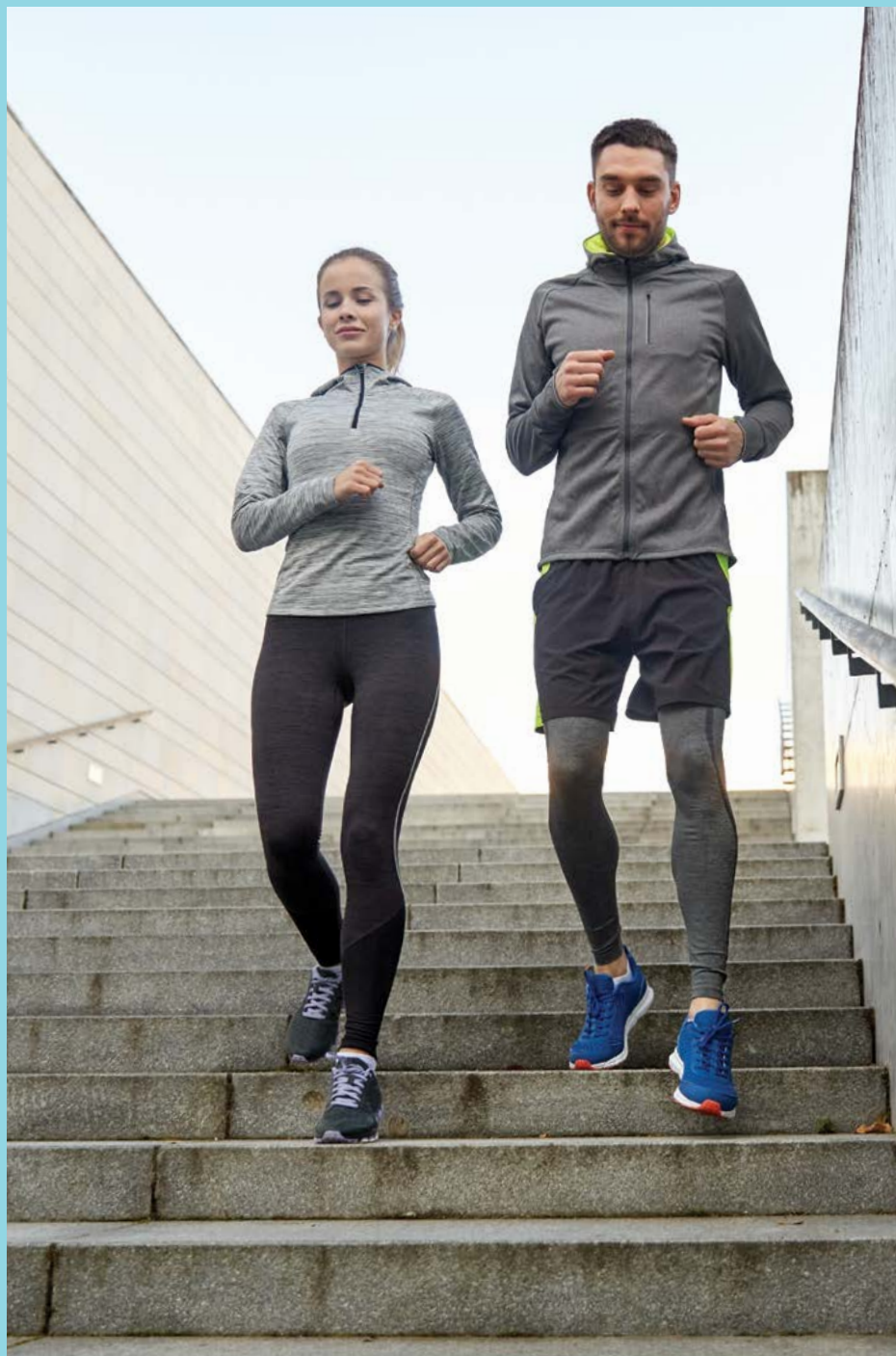
PUBLICATION 2022

E Cerin, B Giles-Corti, M Lowe, Davey R et al. Determining optimal thresholds for spatial indicators of healthy and sustainable cities: findings from the IPEN Adult study. *Lancet Global Health*, 10 (2022), pp. e895–e906.

PARTICIPATING COUNTRIES

Australia, Belgium, Brazil, Colombia, Czech Republic, Denmark, Hong Kong, Mexico, New Zealand, Spain, England, USA.

US Coordinating Centre — University San Diego.





L-R: Matthew James, Deputy CEO, Australian Institute of Health and Welfare with Professor Paddy Nixon, Vice Chancellor and President, University Canberra.

PARTNERSHIPS

AUSTRALIAN INSTITUTE HEALTH & WELFARE (AIHW) – UNIVERSITY OF CANBERRA (HEALTH RESEARCH INSTITUTE)

The AIHW is an independent statutory Australian Government agency with more than 30 years of experience working with health and welfare data. Information and statistics produced by the institute are used to inform and support better policy and service delivery decisions, leading to better health and wellbeing for all Australians. Partnership with the AIHW, will enable our researchers to increase the impact of our research in addressing key policy issues.



PUBLIC HEALTH FOUNDATION OF INDIA

MoU signed between the Public Health Foundation of India (PHFI) and the University of Canberra (Health Research Institute) for collaboration in research and training.

The partnership will provide opportunities for joint PhD students from the University of Canberra and PHFI to take part in student exchange and short-term programs, for staff exchange and joint research.



Professor Sanjay Zodpey, President, Public Health Foundation of India.

UNIVERSITY OF LOYOLA

A formal research MoU with UC (HRI) and the University of Loyola will further advance our global research reach.

“We work with local government, industry partners and our community to impact community wellbeing and sustainability”.



L-R: Professor Carlos Garcia (Acting Vice-Chancellor) University Loyola Andalucia and Professor Lucy Johnson (Deputy Vice Chancellor Research & Enterprise UC).

ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)

Esri is an American software company specialising in Geographical Information Systems and a world leading supplier of GIS software, web GIS and geodatabase management applications. Esri has 49 offices and over 4,000 employees worldwide in the United States, Europe, the Middle East and Africa and Asia Pacific.

Esri has partnered with the Australian Geospatial Health Lab hosted by the Health Research Institute to showcase applications to health and wellbeing.

The choice of scale of aggregation is critically important in the spatial epidemiology of highly prevalent non-communicable diseases such as circulatory diseases. When data were aggregated at the high spatial resolution SA1 level, areas with high age-sex standardised rates of circulatory-disease-related hospital admissions across the

population are located more precisely whereas, when aggregated at the lower resolution SA2 and SA3 levels, areas with higher estimated rates are only crudely defined (SA2) or barely defined at all (SA3).

This suggests two things: 1) the primary drivers of circulatory diseases may be highly local i.e. in close proximity to individual residences in the most affected (exposed?) areas and 2) aggregation to a larger geographic scale may smooth localised variation within the larger area, effectively attenuating 'signal' in the data. This can mean that resources are targeted inappropriately or, at best, ineffectively. It should be noted that, currently, most resource allocation and targeting decisions in the ACT are done at the SA3 (district) level.

Since cardiovascular disease is a major cause of emergency hospital admissions, these findings have major implications for our ability to contain the rising costs of health care.

Comparison of health care resource use at three different degrees of spatial resolution. Maps show circulatory disease-related hospitalisation rates for the Australian Capital Territory over the years 2010–2012. Higher rates are shown towards the red end of the scale and lower rates towards the blue end of the scale. All rates have been age-sex standardised using the indirect adjustment method.

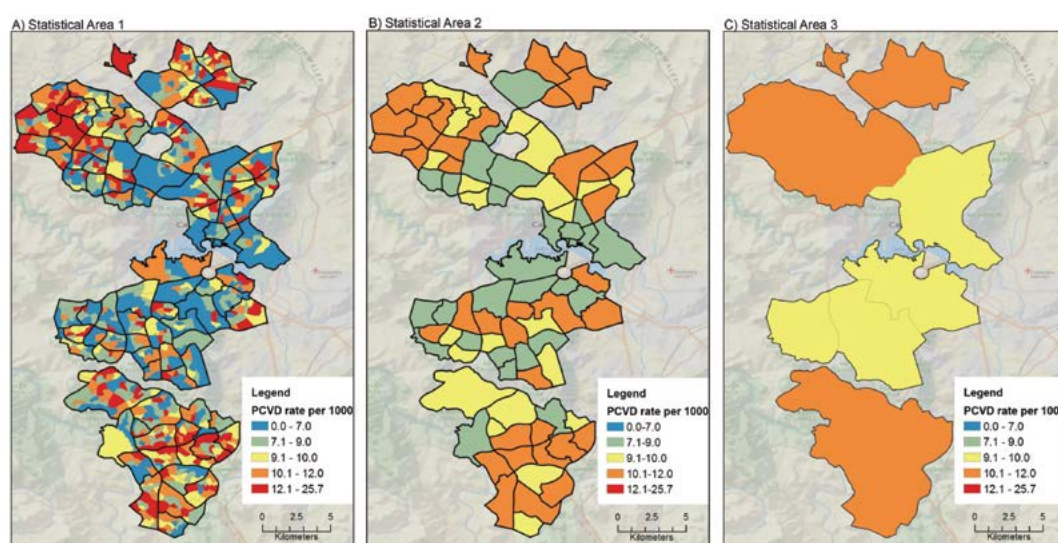


FIGURE 3. High spatial resolution mapping of hospital admissions for circulatory disease-related events in the Australian Capital Territory 2010–2012

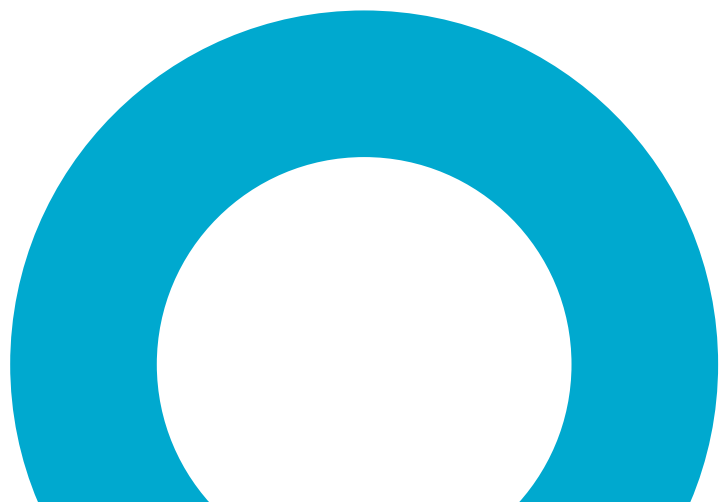


CURRENT RESEARCH PROJECTS

1. Supporting mental health through building resilience during and after bushfires: lessons from the 2019–20 bushfires in southern NSW and the ACT.
[Funded by the Medical Research Future Fund.](#)
2. Environmental and social determinants of health in the Australian Capital Territory: program interventions aimed at reducing the burden of disease and avoidable hospital admissions.
[Funded by the Medical Research Future Fund.](#)
3. A good start in life for young children: reducing vulnerability and health inequity.
[Funded by the Medical Research Future Fund.](#)
4. Indigenous engagement and leadership in the evaluation of Indigenous health and wellbeing programs: Taking steps to improve government and non-government commissioning practices.
[Funded by the National Health and Medical Research Council.](#)
5. EMPOWER.
[Funded by the National Health and Medical Research Council.](#)
6. A national e-Infrastructure for high-resolution population spatial modelling.
[Funded by the Australian Research Council.](#)
7. Novel modelling to improve decision-making for neighbourhood design to reduce chronic disease risk.
[Funded by National Health and Medical Research Council.](#)
8. A very brief intervention for physical activity behaviour change in cardiac rehabilitation: the 'Measure It!' trial.
[Funded by the Medical Research Future Fund.](#)
9. Integrating Pharmacists in Residential Aged Care Facilities to improve the quality use of medicines.
[Funded by the Capital Health Network through the ACT's Primary Health Program.](#)
10. Dasman Diabetes Institute Geohealth Lab and Enablement Project.
[Funded by the Dasman Diabetes Institute.](#)
11. Spatial management of health risk: Applying geospatial technology for risk visualisation, hotspot identification, and analysis of geographic variation.
[Funded by the Digital Health Cooperative Research Centre.](#)
12. Individual-level predictive models for management of postoperative pain.
[Funded by the Digital Health Cooperative Research Centre.](#)
13. National Best Practice Unit for Tackling Indigenous Smoking.
[Funded by the Commonwealth Department of Health & Ninti One.](#)
14. Cotton industry social and wellbeing sustainability indicators.
[Funded by the Cotton Research and Development Corporation.](#)
15. Validation of a novel skin antibiotic for treatment of impetigo.
[Funded by ANU Connect Ventures.](#)
16. Evaluation of the veterans and first responders mental health grant program.
[Funded by Movember.](#)
17. Atlas of Dementia Care.
[Funded by University NSW.](#)
18. ACT Government — Living well survey.
[Funded by the Australian Capital Territory Government.](#)
19. Developing systems and approaches to monitoring the impact of the COVID-19 pandemic on the Australian health system.
[Funded by the Australian Institute Health & Welfare.](#)
20. Road Safety Research Fund.
[Funded by the NRMA — ACT Road Safety Trust.](#)
21. Ride Score — Safe Routes To School.
[Funded by the Australian Sports Commission.](#)
22. DJPR 2020 Regional Wellbeing Survey.
[Funded by Victorian Department of Jobs, Precincts and Regions.](#)
23. Does telehealth improve access, equity and sustainability in regional and rural populations?
[Funded by Illawarra Shoalhaven Local Health District.](#)
24. NRRA Regional Wellbeing Survey 2021 additions.
[Funded by National Recovery and Resilience Agency.](#)
25. South West Slopes Forestry Hub bushfire socio-economic assessment.
[Funded by South West Slopes Forestry Hub.](#)
26. Cardiac Rehabilitation for transient ischaemic Attack and Mild-Stroke (CRAMS): a randomised controlled trial.
[Funded by ACT Health.](#)

CURRENT RESEARCH PROJECTS (cont.)

27. MHHRQ: Intersections of Mental Health and Human Rights in Queensland.
Funded by Queensland Mental Health Commission.
28. Geospatial Analysis of ACT Alcohol related Emergency Department (ED) Presentations.
Funded by ACT Health.
29. Victorian agricultural worker health and safety.
Funded by Victorian Department of Jobs, Precincts and Regions.
30. Provision of data tables from the 2021 Regional Wellbeing Survey.
Funded by NSW Mental Health Commission.
31. Wellbeing and Disability Research Analysis.
Funded by Chief Minister Treasury and Economic Development Directorate, ACT Government.
32. Identifying the reasons behind increase in involuntary psychiatric treatment in Queensland.
Funded by Mental Health Review Tribunal Queensland.
33. A smartphone app for sedentary behaviours change in cardiac rehabilitation and the effect on hospital admissions: the To Do — CR randomised control trial.
Funded by Digital Health Cooperative Research Centre.
34. Evaluation of Social Workers in General Practice Program.
Funded by Capital Health Network.
35. Early Warning of Resilience Loss.
Funded by Agriculture Innovation Hubs.
36. A Local Navigation Tool for Mental Health Care (MChart): Demonstration study in ACT.
Funded by the Digital Health Cooperative Research Centre.
37. Recreational fishing and human wellbeing: insights from existing data and development of best practice approaches to future measurement.
Funded by Fisheries Research Development Corporation.
38. Evidence-based guidelines to understanding post-disaster impacts and supporting local community groups to maintain wellbeing and positive social conditions.
Funded by the Murray Darling Basin Authority.
39. A Local Navigation Tool for Mental Health Care (MChart): Demonstration study in ACT.
Funded by the Digital Health CRC.
40. Socio-economic impacts of the softwood plantation industry within the Central West NSW Forestry Hub region.
Funded by BDO Services Pty Ltd.



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1. **Freene, N.**, Walleth, H., Flynn, A., Preston, E., Cowans, S., Lueck, C., **Niyonsenga, T.**, **Mohanty, I.**, **Davey, R.**
2. (2022) Cardiovascular Rehabilitation for transient ischaemic Attack and Mild Stroke: the CRAMS effectiveness-implementation hybrid study protocol *BMC Health Services Research* 22 (1) 10.1186/s12913-022-08797-3
3. **Freene, N.**, McManus, M., Mair, T., Tan, R., **Davey, R.** (2022) Association of device-measured physical activity and sedentary behaviour with cardiovascular risk factors, health-related quality-of-life and exercise capacity over 12-months in cardiac rehabilitation attendees with coronary heart disease *BMC Sports Science, Medicine and Rehabilitation* 14 (1) 10.1186/s13102-022-00562-7
4. Patterson, K., **Davey, R.**, Keegan, R., Kunstler, B., Woodward, A., **Freene, N.** (2022) Behaviour change techniques in cardiovascular disease smartphone apps to improve physical activity and sedentary behaviour: Systematic review and meta-regression *International Journal of Behavioral Nutrition and Physical Activity* 19 (1) 10.1186/s12966-022-01319-8
5. Ikeda, E., Guagliano, J.M., Atkin, A.J., (...) **Davey, R. et al.** (2022) Cross-sectional and longitudinal associations of active travel, organised sport and physical education with accelerometer-assessed moderate-to-vigorous physical activity in young people: the International Children's Accelerometry Database *International Journal of Behavioral Nutrition and Physical Activity* 19 (1) 10.1186/s12966-022-01282-4
6. Haider, I., **Kosari, S.**, Naunton, M., **Niyonsenga, T.**, Peterson, G.M., **Koerner, J.**, **Davey, R.** (2022) Quality Use of Medicines Indicators and Associated Factors in Residential Aged Care Facilities: Baseline Findings from the Pharmacists in RACF Study in Australia *Journal of Clinical Medicine* 11 (17) 10.3390/jcm11175189
7. **Saunders, V.**, Beck, M., McKechnie, J., Lincoln, M., Phillips, C., Herbert, J., **Davey, R.** (2022) A Good start in life: Effectiveness of integrated multicomponent multisector support on early child development-Study protocol *PLoS ONE* 17 (8) 10.1371/journal.pone.0267666
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11. Firouraghi, N., Kiani, B., Jafari, H.T., **Learnihan, V.**, Salinas-Perez, J.A., Raeesi, A., **Furst, M.A.**, **Salvador-Carulla, L.**, **Bagheri, N.** (2022) The role of geographic information system and global positioning system in dementia care and research: a scoping review *International Journal of Health Geographics* 21 (1) 10.1186/s12942-022-00308-1
12. Nia, M.N., Mohajer, S., **Bagheri, N.**, Sarbooz-hoseinabadi, T. (2022) The effects of family-centered empowerment model on depression, anxiety, and stress of the family caregivers of patients with COVID-19: a randomized clinical trial *BMC Primary Care* 23 (1) 10.1186/s12875-022-01795-8
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16. **Salvador-Carulla, L.**, **Furst, M.A.**, **Tabatabaei-Jafari, H.**, Mendoza, J., Riordan, D., Moore, E., Rock, D., Anthes, L., **Bagheri, N.**, Salinas-Perez, J.A. (2022) Patterns of service provision in child and adolescent mental health care in Australia *Journal of Child Health Care* 0 (0): 1–15 10.1177/13674935221146381

SELECTED PUBLICATIONS 2022 (cont.)

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20. **Dale, M.J., Carroll, S.J., Daniel, M.** (2022) The conflict between Public Health and 'Big Food': A Counterinsurgency? *Health Promotion Journal of Australia* 33 (3): 614–617 10.1002/hpja.544
21. **Carroll, S.J., Dale, M.J., Bail, K.** (2022) "Out and proud.... in all your shaking glory" the wellbeing impact of a dance program with public dance performance for people with Parkinson's disease: a qualitative study *Disability and Rehabilitation* 10.1080/09638288.2022.2122598
22. Batten, M., **Kosari, S., Koerner, J., Naunton, M., Cargo, M.** (2022) Evaluation approaches, tools and aspects of implementation used in pharmacist interventions in residential aged care facilities: A scoping review *Research in Social and Administrative Pharmacy* 18 (10): 3714–3723 10.1016/j.sapharm.2022.05.006
23. Dudley, E., Mahendran, N., Howes, T., **Freene, N.** (2022) Perspectives of Stroke and Cardiac Clinicians on Cardiac Rehabilitation Post-TIA or Mild Stroke *Journal of Cardiopulmonary Rehabilitation and Prevention* 42 (5): 377–379 10.1097/HCR.0000000000000729
24. Hearn, E., Gosselink, R., **Freene, N., Boden, I., Green, M., Bissett, B.** (2022) Inspiratory muscle training in intensive care unit patients: An international cross-sectional survey of physiotherapist practice *Australian Critical Care* 35 (5): 527–534 10.1016/j.aucc.2021.08.002
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28. Nasir, B.F., Kisely, S., Hides, L., Brennan-Olsen, S., Kondalsamy-Chennakesavan, S., Nicholson, G.C., **Gill, N.S., Beccaria, G., Toombs, M.** (2022) Translating research into action: The design and development of an Indigenous specific suicide intervention skills training program (I-ASIST) *Australian Journal of Rural Health* 30 (6): 870–875 10.1111/ajr.12903
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31. Amos, A., Evans, M., **Gill, N., Nitschinsk, K., Sharanya, A., Kisely, S.** (2022) Transparency and accountability are needed to clarify large differences in the use of forensic orders across Australia *International Journal of Law and Psychiatry* 82 10.1016/j.ijlp.2022.101795
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34. Nasir, B.F., Ryan, E.G., Black, E.B., Kisely, S., **Gill, N.S.**, Beccaria, G., Kondalsamy-Chennakesavan, S., Nicholson, G.C., Toombs, M. (2022) The risk of common mental disorders in Indigenous Australians experiencing traumatic life events *BJPsych Open* 8 (1) 10.1192/bjo.2021.1063
35. Galbally, M., Eggleston, K., Northwood, K., Siskind, D., Berk, M., Suetani, S., **Gill, N.**, O'Connor, N., Harvey, S.B., Every-Palmer, S. (2022) Renewal of academic psychiatry without addressing gender equity will render it Jurassic rather than endangered *Australian and New Zealand Journal of Psychiatry* 10.1177/00048674221123494
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38. Usher, K., Fagan, A., Brown, J.A., Mather, C., Marlow, A., Power, T., van de Mortel, T., West, C., Hutchinson, M., Zhao, L., Terry, V., **Woods, C.**, Lea, J. (2022) The financial challenges for Australian nursing students attending placement-based work-integrated learning. *Collegian* 29 (2): 154–160 10.1016/j.colegn.2021.07.005
39. Win Kyaw, M., Cheng, H.C., Obermair, H., **Woods, C.**, Perry, C., De Costa, C. (2022) Australian medical students' and junior doctors' perceptions of gender discrepancies in obstetrics and gynaecology *Australian and New Zealand Journal of Obstetrics and Gynaecology* 10.1111/ajo.13617
40. Fiolet, R., **Woods, C.**, Moana, A.H., Reilly, R., Herrman, H., McLachlan, H., Fisher, J., Lynch, J., Chamberlain, C. (2022) Community perspectives on delivering trauma-aware and culturally safe perinatal care for Aboriginal and Torres Strait Islander parents *Women and Birth* 10.1016/j.wombi.2022.07.174
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42. **Learnihan, V.**, Kinfu, Y., **Turrell, G.** (2022) Social determinants of depression among mid-to-older aged Australians: A prospective study of the effects of neighbourhood disadvantage and crime *SSM – Population Health* 19 10.1016/j.ssmph.2022.101190
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