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Founding Director's message



We take every opportunity to help make a better healthcare system for patients and the staff who serve them.

To say that the Australian Institute of Health Innovation is productive is an understatement. Every day of the year we publish in the leading international journals or present keynote, plenary or other talks to conferences across the world—way more than 365 publications and presentations annually.

But academic productivity as measured by the number and prestige of the articles we publish and talks we give is not the sole metric—or even the most important metric—of our research enterprise. Nor is the number of staff, students and visiting personnel, although there are more than 260 of us. Nor is funding, although we currently manage over \$60.6m of grants and other contracts, and we secured substantial new funding during 2023 including from the National Health and Medical Research Council (NHMRC), the Medical Research Future Fund (MRFF), European Union, various Fellowships, and government and industry contracts.

Despite being a very treasured metric, it's not the number of collaborations and partnerships, of which we have over 133 including with the United Nations, the World Health Organisation (WHO), the Organisation for Economic Co-operation and Development (OECD) and the International Society for Quality in Health Care (ISQua).

And it's not the number of projects, although we have well over 100 going on at any point in time.

Key new projects funded during 2023:

- Improving the health system's response when patients are harmed
- Embedding genomics in primary care, nationally
- Leveraging informatics to optimise pharmacist-led medication reviews in residential aged care
- Utilising near real-time electronic general practice data to establish effective care and best-practice policy
- Undertaking evaluations for the Pharmaceutical Benefits Advisory Committee (PBAC) and Medical Services Advisory Committee (MSAC)
- Enhancing human reasoning with generative AI
- Designing new models of integrated primary care for Long COVID
- Strengthening resilience and mental wellbeing for leaders in aged care
- Utilising AI to examine chest X-rays

So if it's not any of those important elements, what's the key metric? to It's the impact that our research high

makes on patients and families first and foremost, and other stakeholders in the health system. I'm mindful of the young people living with bowel cancer in Australia and the UK who told us about their diagnostic journey—of the healthcare professionals they met, how they felt cared for, or let down and where they thought the system could have served them better. By trusting us with their stories we were able to publish research that underpinned the national awareness campaign of Bowel Cancer Australia and saw a change in Australian clinical guidelines to lower the bowel cancer screening age from 50 years old to 45.

Another example of our impact is the Health Innovation Series. Focused on e-medication safety and reporting evidence-based recommendations to improve care delivery and outcomes. Each issue provides very practical tips for organisations and system-users to optimise e-medication systems and how they are used. Since the launch of the series in September 2022, 17 issues have been published with more than 5000 downloads by December 2023. Feedback has been extremely positive including this statement from one of our key stakeholders: "The Society of Hospital Pharmacists of Australia is involved in advocating for optimisation of

electronic medication system design to support patient safety. The issues highlighted by the Health Innovation Series are therefore highly relevant."

In what follows you can read about these achievements and many other aspects of our research. The Annual Report is a treasure trove of data, stories and evidence about making care better.

It remains for me to record my appreciation to all those associated with AIHI-students, partners, staff, and visiting personnel, here and overseas—for their passion, expertise, and commitment to our cause. A special note of appreciation, too, to our Board members; the Deans of the Faculty of Medicine, Health and Human Sciences and Macquarie Business School, Professor Patrick McNeil and Professor Eric Knight; and the University's Executive, led by Professor S Bruce Dowton, for their generous support of AIHI. On behalf of my fellow Directors, Professors Johanna Westbrook, Enrico Coiera and Henry Cutler, a genuine thank you to all who help make our research meaningful and valuable.

Professor Jeffrey Braithwaite

FOUNDING DIRECTOR

MACQUARIE UNIVERSITY



Australia's first fully integrated health precinct created around our on-campus hospital



Ranked in the top 100 universities globally and top 25 in 3 UN Sustainable Development Goals

(TIMES HIGHER EDUCATION IMPACT RANKINGS, 2023)

Who we are

The Australian Institute of Health Innovation (AIHI) stands as a globally recognised, research-driven institute committed to enhancing healthcare services, health systems, and health policy both in Australia and on the international stage. Situated within Macquarie University's groundbreaking MQ Health, Australia's first fully integrated academic health sciences centre, AIHI proudly houses the largest team of health services researchers in the country, solidifying its status as one of the premier research groups of its kind globally.

During 2023, AIHI underscored its steadfast commitment to impactful research by managing grants and contracts with an enterprise value exceeding \$60 million. AIHI investigators also actively contributed to research endeavours led by other institutions, for projects with an additional enterprise value of \$64.7 million.

AIHI's sustained productivity owes much to the determined efforts of our highly skilled, multidisciplinary team. Consisting of clinicians, scientists, social scientists, psychologists, pharmacists, engineers, epidemiologists, informatics experts, economists, statisticians and data analysts, alongside dedicated professional staff, this cohesive unit works collaboratively to fortify health systems in Australia and internationally.

AlHI's 61 Higher Degree Research (HDR) students, heralding the next generation of experts, contribute immensely to numerous research projects. Moreover, our involvement extends to teaching in Macquarie University's Master of Public Health Program, coupled with the administration of research projects and provision of supervision and teaching in the flagship Macquarie University Doctor of Medicine (MD) Research Program.

Instrumental in shaping many important healthcare projects and initiatives, AIHI has formed pivotal partnerships with the Australian Government, state and territory governments, and the private sector. Leveraging our global platform, AIHI collaborates extensively with major international agencies such as the UN, WHO and OECD, engaging in multifaceted health reform initiatives with governments, policymakers and academics worldwide.

AIHI comprises four independent, complementary and highly collaborative research centres, each of which takes a systems perspective to address challenges in healthcare, utilising highly innovative and wide-ranging research methods:

- Centre for Healthcare Resilience and Implementation Science (CHRIS) 된
- Macquarie University Centre for the Health Economy (MUCHE) 원
- · Centre for Health Informatics (CHI) 된
- · Centre for Health Systems and Safety Research (CHSSR) 된



Our leadership in translational health services research is further evidenced by the innovative work of our three NHMRC funded centres:

- NHMRC Partnership Centre for Health System Sustainability ปี
- ・NHMRC Centre of Research Excellence in Digital Health 원
- NHMRC Centre of Research Excellence in Implementation Science in Oncology **1**

AIHI at a glance

HEAL. LEARN. DISCOVER.

\$60.6m

Enterprise value of projects under AIHI management

120

Number of research projects under AIHI management \$64.7m

Enterprise value of grants administered elsewhere involving AIHI

\$21.3m

Enterprise value of grants commenced or awarded in 2023

\$46m

Category 1 Funding for grants under management in 2023

261

Researchers, visiting appointees and professional staff

61

PhD and MRes students

246

Peer-reviewed publications including journal articles, books and book chapters

>300

Presentations, including keynote addresses, talks, workshops and seminars

At the core of AIHI's mission lies research, serving as the driving force behind positive transformations in healthcare policy, practice, and behaviour. Collaborating seamlessly with frontline stakeholders—patients, caregivers, policymakers and health professionals alike—our focus is on ensuring the efficient and effective delivery of sustainable person-centred care.



We work closely with patients and other stakeholders to design and undertake research into, and for, the health system



We examine the performance and quality of the health system



We measure the effectiveness and efficiency of interventions



We assess the impact of government policy on patients and the health economy



Given healthcare is complex, we also investigate how and why interventions work



We create new insights into the health system and society from data



We introduce new research methods, innovations, and theories



We formulate new frameworks and tools to help improve care

GRANTS UNDER MANAGEMENT 2023 BY FUNDING CATEGORY

CATEGORY 1

Grants awarded from the Australian Competitive Grants Register

Other Public Sector Research and Development Income

CATEGORY 2 AND 3

OTHER
Industry and Other
Research and
Development Income





Our Board



CHAIR
Professor Patrick McNeil
Deputy Vice-Chancellor
Faculty of Medicine
Health and Human
Sciences, MQ



Dr Elizabeth Koff AMDirector
Telstra Health
Health System member



Elizabeth de Somer CEO Medicines Australia Health System member



Professor Adam Jaffé
Paediatric Respiratory
Consultant
Sydney Children's
Hospitals Network
Health System member



Catherine Lourey NSW Mental Health Commissioner 2017–2024 Health System member



Dr Karen Owen Independent member



Emeritus Professor Les White AM Independent member



Professor Cliff Hughes AO MQ Health University member



Professor Sakkie Pretorius Deputy Vice-Chancellor Research, MQ University member



Professor Eric Knight Executive Dean Macquarie Business School University member



Professor Jeffrey BraithwaiteAIHI member



Professor Enrico Coiera AIHI member



Professor Johanna Westbrook AIHI member



Professor Henry Cutler AIHI member



Chrissy ClayBoard Secretary
AIHI member



Our partners

The Australian Institute of
Health Innovation takes pride in
establishing partnerships with
government bodies, industries,
agencies, health services,
and research institutions.
Additionally, we greatly appreciate
our collaboration with health
consumers who are integral to
our co-design research approach.
For a comprehensive list of
our national and international
partners, please visit our website
at aihi.mq.edu.au. A curated
selection is outlined here.



Health systems



Academia



Clinicians



Industry



Health consumers



Peak bodies



International bodies



Aalborg University, Denmark

Abbott Diagnostics

AbbVie

ACT Government Health Directorate

ACT Health

Aged Care Industry Information

Technology Council

Aged Care Quality and Safety

Commission

Agency for Clinical Innovation NSW

American Medical Informatics

Association

Amgen Australia

Anglicare

Annalise.ai

Australasian Institute of Digital Health (AIDH)

Australian and New Zealand Hip Fracture Registry

Australian Commission on Safety and Quality in Health Care (ACSQHC)

Australian Council on Healthcare Standards (ACHS)

Australian Defence Force

Australian e-Health Research Centre

Australian General Practice Accreditation Ltd (AGPAL)

Australian Genomics Health Alliance

Australian Government Department of Social Services

Australian Health Insurance

Association (AHIA)

Australian Healthcare and Hospitals Association (AHHA)

Australian Hearing Hub (AHH)
Australian National University

Australian Research Council (ARC)

Australian Social Prescribing Institute

of Research and Education

BaptistCare

BCAL Diagnostics

BESTMED (Best Health Solutions Pty Ltd)

Black Dog Institute

Blacktown Hospital

Bond University

Bowel Cancer Australia

Brain and Mind Centre, University

of Sydney

Bupa Health Foundation Australia

Bureau of Health Information

Cancer Australia

Cancer Institute NSW (CINSW)

Canon Institute for Global Studies,

Japan

CanTeen

Children's Cancer Institute, Australia

Clinical Excellence Commission NSW

Cochlear Ltd

Consumers Health Forum of Australia

CSIRO Australian e-Health

Research Centre

CSIRO Data61

Deeble Institute for Health Policy

Department of Health (Commonwealth) plus State and Territory departments of health

Digital Health Cooperative Research Centre (DHCRC)

eHealth NSW

Evidentli

Federal University of Rio Grande do Sul,

Brazil

Fragile X Association of Australia Fudan University, China Fujitsu Australia Limited Fujitsu Limited

Garvan Institute of Medical Research GenePath

Genetic Support Network Australia Harrison.ai

Harvard Medical School, USA Harvard School of Public Health, USA Health Consumers NSW

Healthdirect Australia

Health Infrastructure NSW

Imperial College, London, UK

Independent Health and Aged Care Pricing Authority

Institute for Information Industry, Taiwan

International Medical Informatics Association

International Society for Quality in Health Care (ISQua)

James Cook University

Johnson & Johnson

Juvenile Diabetes Research

Foundation

Karolinska Institutet, Sweden

Kids Research Kolling Institute KPMG Australia

Local Health Districts – various Local Health Networks – various

Macquarie University Business School

Macquarie University Centre for Motor Neuron Disease Research Macquarie University Cyber

Security Hub

Macquarie University Hospital

and MQ Health

Mahidol University, Thailand

Medibank Private Ltd Medical Council of NSW

Melanoma Institute Australia

Mental Health Commission of NSW

Menzies Centre for Health Policy

Mito Foundation Australia

Monash University

Murdoch Children's Research Institute National Disability Insurance Agency

National Disability Insurance Scheme

National Health and Medical

Research Council

National Institutes of Health and National Library of Medicine, USA

National Stroke Foundation

National Suicide Prevention Office

Neu-Ulm University of Applied

Sciences, Germany

NSW Department of Communities

and Justice

NSW Institute of Trauma and Injury Management

NSW Health

NSW Health Pathology

Oracle

Organisation for Economic Co-operation and Development

Outcome Health

Perth Children's Hospital

Primary Health Networks (PHN)

- various

Queensland Department of Health

Rare Voices Australia

Research Australia

Roche Australia

Royal Australasian College of Medical Administrators

Royal Australian and New Zealand

College of Radiologists

Royal Australian College of

General Practitioners

Scalabrini

SMA Australia

St George Hospital

Sydney Children's Hospitals Network (Westmead) including Kids Research

The Royal College of Pathologists

of Australasia

The Telethon Institute

Therapeutic Goods Administration

University of New South Wales

University of Oxford, UK

University of Southern Denmark,

Denmark

University of Stavanger, Norway

University of Sydney

University of the Sunshine Coast

University of Tromsø, Norway

University of York, UK

Westmead Hospital

WHO

Our Directors



Professors Henry Cutler, Enrico Coiera, Johanna Westbrook and Jeffrey Braithwaite

PROFESSOR JEFFREY BRAITHWAITE 1

Founding Director, Australian Institute of Health Innovation
Director, Centre for Healthcare Resilience and Implementation Science
Professor of Health Systems Research, Macquarie University
President, International Society for Quality in Health Care

Professor Jeffrey Braithwaite is a leading health services and systems researcher with an international reputation for his work investigating and contributing to systems improvement. He is visiting or adjunct Professor at Newcastle University and University of Birmingham in the UK; University of Southern Denmark; University of Stavanger, Norway; University of New South Wales; and Honorary Senior International Research Fellow at the Canon Institute for Global Studies in Tokyo, Japan. He is President of the International Society for Quality in Health Care (ISQua) 2020 to 2024. He has considerable expertise in researching the culture and structure of acute settings, leadership, management and change in health sector organisations, quality and safety in healthcare, accreditation and surveying processes in international context and the restructuring of health services, working with 152 countries.

Professor Braithwaite is well known for bringing management and leadership concepts and evidence into the clinical arena.

Professor Braithwaite has published extensively about organisational, social and team approaches to care (over 835 refereed contributions and 1,490 publications) with more than 34,650 citations. He has presented at or chaired international and national conferences, workshops, symposia and meetings on more than 1,470 occasions, including over 135 keynote addresses. Theories and ideas he has shaped or devised are now in common use; for example, multi-method, triangulated approaches to research, the boundary-less hospital, accreditation models in general practice and beyond, clinician-managers as key players in reform initiatives, fundamental principles for the governance of health systems, diversity in clinical professional groups, and inter-professional learning and culture change as a more sustainable strategy for reform. His empirical results have exposed the distinctive attitudes of clinical professional groups, how clinician-managers enact their leadership responsibilities, the behavioural displays of clinicians in service structures and the status of system-wide patient safety improvement initiatives.

PROFESSOR HENRY CUTLER € 1

Inaugural Director, Centre for the Health Economy Visiting Researcher, Nuffield Department of Population Health, University of Oxford

Professor Cutler is the inaugural Director of the Macquarie University Centre for the Health Economy (MUCHE). He leads a team of 20 health economists and 10 PhD students, funded by competitive academic grants, along with government and non-government organisations. Professor Cutler has led over 200 health economics research projects on a broad range of topics for federal and state government departments, government agencies, industry and non-government organisations.

Professor Cutler has attracted over \$15 million in research funding from government and non-government organisations.

Professor Cutler has undertaken projects for the Department of Health and Aged Care (DoHAC), Aged Care Financing Authority, NSW Health, and NSW Treasury. Professor Cutler is also a chief investigator on multiple MRFF, NHMRC and other academic grants worth \$32 million. In 2022, Professor Cutler received the inaugural Deeble Institute Fellowship (Australian Healthcare and Hospitals Association) to produce a policy brief for the government on the shift in financial risk associated with value-based payments.

Professor Cutler is the Group
Leader for the Macquarie University
Health Technology Evaluation
team, which evaluates the cost
effectiveness of pharmaceuticals
and medical devices for the
Pharmaceutical Benefits Advisory
Committee (PBAC) and the Medical
Services Advisory Committee (MSAC).
The team has critically reviewed
over 50 detailed applications, which
were used to provide advice to the
Minister for Health and Aged Care on
whether to subsidise medicines and
medical devices.

Professor Cutler has contributed extensively to government policy thinking. He sits on the National Suicide Prevention Office Expert Advisory Board, the DoHAC Expert Advisory Panel for the Review of General Practice Incentive Programs and the Review of Primary Care After Hours Programs, and Chairs the Research Australia Health Economics Working Group.

Professor Cutler has been a member of the Independent Health and Aged

Care Pricing Authority (IHACPA) Interim Aged Care Working Group, and the National Disability Insurance Agency (NDIA) Investment Effectiveness Program Academic Advisory Panel. In the last five years, he also sat on an expert committee for the Victorian Royal Commission into Mental Health, and was an expert witness in the Royal Commission into Aged Care Quality and Safety. He also sat on the National Mental Health Commission National Workplace Initiative Evaluation Group.

Professor Cutler is collaborating with several Macquarie University research centres, including the Lifespan Health and Wellbeing Consilience Centre and MindSpot. He is also collaborating with several external research centres on multi-million dollar academic grants, such as the Black Dog Institute and the UNSW Centre for Healthy Brain Ageing. Professor Cutler was invited to become a Visiting Researcher at the Nuffield Department of Population Health, University of Oxford in 2024.

PROFESSOR ENRICO COIERA Đ

Director, Centre for Health Informatics Founder, Australian Alliance for Artificial Intelligence in Healthcare Professor in Medical Informatics, Macquarie University

Professor Enrico Coiera has been working at the intersection of information technology and healthcare for over three decades. Trained in medicine and with a computer science PhD in Artificial Intelligence, he began his postdoctoral career with 10 years at the prestigious Hewlett-Packard Research Laboratories in Bristol, UK, where he led numerous health technology projects. His internationally recognised textbook, *Guide to Health Informatics*, is in its third edition and has been translated into several languages.

Professor Coiera led development of the National Policy Roadmap for AI in Healthcare.

He is the founding Professor in Medical Informatics at Macquarie University and the founding Director of the Centre for Health Informatics (CHI). CHI is the longest running biomedical and health informatics academic research group in Australia. Professor Coiera is also founder of the Australian Alliance for Artificial Intelligence in Healthcare (AAAiH) formed in 2018, and responsible for the National Policy Roadmap for AI in Healthcare launched in 2023.

In 2022, Professor Coiera was invited to be editor-in-chief for a focus issue on climate change and health informatics by the prestigious *Journal of the American Medical Informatics Association (JAMIA)*, and in 2023 launched a new research stream at CHI: Climate Change and Digital Health.

Professor Coiera is a Fellow of the Australian Academy of Health and Medical Sciences, and elected Foundation Fellow and the first President of the Australian College of Health Informatics.

He is a foundation member of the International Academy of Health Sciences Informatics, and a Fellow of the American College of Medical Informatics.

In other achievements, Professor Coiera has held key appointments, served as chief investigator on multiple competitive grants (including two NHMRC Centres of Research Excellence), and currently has over 417 publications exceeding 25,180 citations, and an h-index of 77 (Google Scholar).

Of Professor Coiera's publications, 31 have greater than 200 citations, six have more than 600 citations and one has over 2,400 citations.

PROFESSOR JOHANNA WESTBROOK €

Director, Centre for Health Systems and Safety Research
Professor of Health Informatics and Patient Safety, Macquarie University
Co-Director, Safety, Quality, Informatics and Leadership Program,
Harvard Medical School, Harvard University
NHMRC Elizabeth Blackburn Investigator Leadership Fellow

Professor Johanna Westbrook is internationally recognised for her extensive expertise in medication safety, and her research evaluating the effects of information and communication technology (ICT) in healthcare.

Professor Westbrook has contributed to theoretical models regarding the design of complex multi-method ICT evaluations and conducted large trials of their effects. To support the conduct of observational workflow studies, she developed the Work Observation Method by Activity Timing (WOMBAT) software (version 3.0 available in the Apple Store), now adopted by 66 research teams across 17 countries, who have generated > 80 publications.

Professor Westbrook's highly applied research has significantly advanced our understanding of how clinical information systems deliver (or fail to deliver) expected benefits and supported translation of this evidence into policy, practice, and systemic information technology changes. Her research findings informed the recommendations of the Royal Commission into Aged Care Quality and Safety (2021). Most recently she has led research to investigate the

effects of a large-scale organisational culture change intervention aimed at reducing unprofessional behaviours between hospital staff.

Awarded over \$79 million in research grants, Professor Westbrook has over 600 publications.

In 2023, Professor Westbrook was elected to the Australian Academy of Health and Medical Sciences in recognition of her outstanding contribution to the field of health services research. In 2022, she was awarded the Health Services Research Award by Research Australia, a Telstra Health Brilliant Women in Digital Health Award, and the Health Services Research Association of Australia and New Zealand, Distinguished Investigator Award. In 2020, she was awarded the NHMRC Elizabeth Blackburn **Investigator Grant Award** (Leadership in Health Services Research); and appointed as a Co-Director of Harvard Medical School's Safety, Quality, Informatics and Leadership Program.

Key new grants and contracts for 2023 (Commenced or awarded in 2023)

MEDICAL RESEARCH FUTURE FUND

\$1.97m

Embedding genomics in primary care: using implementation science to design a robust national approach

Professor Jeffrey Braithwaite Dr Janet Long

Partners:

Australian Genomics Human Genetics Society of Australasia Royal College of Pathologists Australia Cystic Fibrosis Australia Fragile X Association of Australia Genetic Support Network of Victoria Rare Voices Australia

\$1.5m

Leveraging informatics to optimise pharmacist-led medication reviews in residential aged care to improve outcomes and cost-effectiveness: a pragmatic cluster randomised controlled trial

Associate Professor Magda Raban Dr Karla Seaman

Partners:

Best Health Solutions (BESTMED) Heritage Care Aged Care Industry IT Council Aged Care Quality and Safety Commission Pharmaceutical Society of Australia Consumers Health Forum of Australia

NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL

Using AI to create smarter, personalised, and scalable interventions for psychological distress

Professor Henry Cutler

Partners:

Black Dog Institute Deakin University QIMR Berghofer Medical Research Institute Leiden University Harvard Medical School **Kyoto University**

Part of a \$5m Synergy grant awarded to CI Scientia Professor Helen Christensen Black Dog Institute

\$500,000

NHMRC-EU Collaborative Research Grant Scheme

Strengthening resilience and mental wellbeing through the Support4Resilience toolbox for leaders in elderly care

Dr Louise Ellis Professor Jeffrey Braithwaite Professor Robyn Clay-Williams

Partners:

€6 million Horizon Europe grant led by Professor Siri Wiig, University of Stavanger, Norway, partnering with six EU countries as well as Australia through AIHI

CONTRACT

\$1.4m

Fujitsu Macquarie Al Research Centre

Enhancing human reasoning with generative AI: personalised digital coach for effective feedback

Professor Shlomo Berkovsky Professor Enrico Coiera

Australian Government Department of Health and **Aged Care**

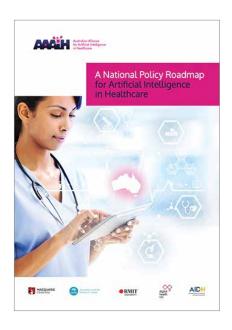
Medical Services Advisory Committee Evaluations

Professor Henry Cutler Associate Professor Bonny Parkinson



Delivering the evidence for health system improvement, every day of the year

Recommendations released for the safe use of AI



A national plan for the safe and ethical use of AI in healthcare led to broad support from the health and technology sectors during 2023.

The Australian Alliance for AI in Healthcare (AAAiH), founded by Professor Enrico Coiera, delivered a National Policy Roadmap for AI in Healthcare, with recommendations including:

- Adoption of a unified approach to AI safety, quality and ethics so that healthcare AI does not harm patients;
- Establishment of strategies to improve AI literacy in health for consumers and the clinical workforce:

- Support of the local healthcare Al industry to grow, successfully navigating between investment in innovation and the requirements for compliance and regulation; and
- Building on the research and development sector to generate the evidence, technologies and products that will underpin AI-driven healthcare and enable Australia to retain world-class sovereign capability.

The Roadmap, which recognises the existing entities responsible for oversight of AI in Australia, was developed by AAAiH after extensive consultation with representatives from federal, state and territory government departments, research, regulatory and professional bodies, as well as consumer and industry representatives.

The Roadmap was developed by AAAiH after extensive consultation







Roadmap

Webinar

Delivering the evidence for health system improvement, every day of the year

Cancer care made safer for people from multicultural backgrounds

With one in three people from a culturally or linguistically diverse (CALD) background experiencing some form of harm during cancer care, research by Professor Reema Harrison has led to new awareness and measures to make care safer.

The Cancer Australia and NHMRC funded research project, CanEngage, sought to enhance patient safety amongst CALD consumers through the development and validation of co-designed patient engagement practices.

A key component of CanEngage was the development of a cofacilitator network of consumers and multilingual fieldworkers within the community with lived experience of cancer to help co-design the research project and interventions. Results from the three-year project were presented at the CanEngage Symposium held at Macquarie University in September.

Professor Harrison was awarded the NSW Premier's Award for 'Outstanding Cancer Research for Improving Equitable Outcomes through Cancer Research' for the CanEnage project. This is the leading NSW awards program to celebrate excellence and innovation in cancer research.



The CanEngage team includes co-facilitators with lived experience of cancer

Consumers and multilingual fieldworkers co-designed the research project and interventions





Delivering the evidence for health system improvement, every day of the year

Gaps in aged care reveal opportunities to make care safer

New world-first research revealing that most residents of aged care homes in Australia receive best practice care for continence issues, but not for six other common conditions including mental health, end-of-life care and urinary tract infections, is leading to opportunities for targeted improvement.

This research from the NHMRC funded CareTrack Aged study is the first to evaluate adherence to evidence-based care for people in long term residential aged care across multiple common conditions.

With aged care nurses conducting specialised reviews, the researchers found that on average, residents received care in line with guidelines 53.2% of the time. Six conditions (skin integrity, end-of-life care, infection, sleep, medication, and depression) had less than 50% adherence with indicators for best care.

According to the project leaders, internationally recognised patient safety experts Professors Jeffrey Braithwaite and Peter Hibbert, the results point to the continued difficulties faced by the aged care sector including workforce shortages with medical, nursing and allied health staff.

The research demonstrated that a lack of ongoing systematic monitoring of the performance of the sector also contributes to the lower rates of evidence-based care. Results provide valuable insights into specific conditions and clinical processes where improvements should be targeted.



Professor Peter Hibbert

A lack of ongoing systematic monitoring of the performance of the sector contributes to lower rates of evidence-based care



Delivering the evidence for health system improvement, every day of the year

New research to tackle climate change

A new collection of research publications reveals and addresses the bi-directional problem faced by health systems in the face of climate change.

On the one hand, health systems are major emitters of greenhouse gases. Between 4-8.5% of a country's emissions are generated by health systems. On the other hand, health systems are on the front lines of dealing with climate-induced harm to affected populations—from bushfires, floods, heatwaves, cyclones and other forms of extreme weather events, and rising infectious diseases. These demands will increasingly stretch health services, in particular emergency departments and primary care providers.

Professor Jeffrey Braithwaite has been invited to advise the UN, WHO and OECD and led several systematic reviews weighing up what the data says on climate change and healthcare.

The Routledge Handbook of Climate Change and Health System Sustainability, edited by Professors Braithwaite and Yvonne Zurynski and Dr K-lynn Smith, will be published in May 2024. With 36 chapters across a myriad of topics including digital support for climate change, mitigation and decarbonisation strategies, this book provides a platform for action, and for future research on the bi-directional problem.



This word cloud represents key terms and phrases related to climate change publications sourced from the following AIHI led publications:

- · Braithwaite et al., 2024. Analysing health system capacity and preparedness for climate change. Nature Climate Change.
- Braithwaite et al., 2024. Ways to reduce healthcare's impact on climate change: A systematic review. BMJ.
- Braithwaite, Zurynski and Smith, 2024. Routledge Handbook on Climate Change and Health System Sustainability. Routledge.
- · Braithwaite, Pichumani and Crowley, 2023. Tackling climate change: the pivotal role of clinicians. BMJ.
- · Braithwaite et al., 2021. Climate change, human health, and health care systems. MJA InSight+.
- Braithwaite et al., 2023. Learning Health Systems 2.0: Future-proofing healthcare against pandemics and climate change. A white paper. Australian Institute of Health Innovation, Macquarie University: Sydney, Australia.
- · Coiera et al., 2022. What did you do to avoid the climate disaster? A call to arms for health informatics. JAMIA.
- · Rahimi-Ardabili et al., 2022. Digital health for climate change mitigation and response: a scoping review. JAMIA.



Delivering the evidence for health system improvement, every day of the year

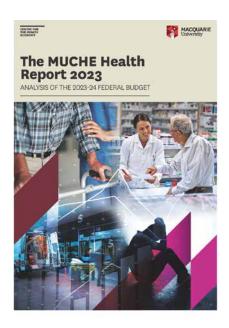
Federal Budget explained for health and aged care

The MUCHE Health Report, produced by AIHI health economics and health services researchers, provides the most comprehensive analysis of Federal Budget announcements and their potential impact on health and aged care.

Released annually, the MUCHE
Health Report discusses budget
announcements within the context
of the healthcare system, including
aged care, hospitals, mental health,
pharmaceuticals, pharmacy, primary
care, and private health insurance.

Professor Henry Cutler said about the 2023 Federal Budget: "This Budget is about optimising the health and aged care workforce, using evidence to make hard decisions and investing in digital health to enable reform. It's not perfect, with some questions looming over the centrepiece bulk billing announcement, but it's a good start."

The MUCHE Health Report is requested by journalists around the country and distributed to key stakeholders within the health and aged care system.



A comprehensive analysis of budget announcements and their potential impact on health and aged care





Higher degree researchers at AIHI represent the future leaders in healthcare, embodying innovative ideas and a dedicated approach. Here, recent candidates share their perspectives.

Researchers of the future



DR ANTOINETTE PAVITHRA

My research training at AIHI was crucial in developing the skills to build fit-for-purpose interventions within complex systems. While at AIHI, I worked on understanding how social-cultural and structural factors influence human behaviours, as well as staff and patient experiences and outcomes in healthcare organisations.

I am now at the NSW Premier's Department working across areas of social policy and community engagement on projects related to youth and community safety and wellbeing. I am passionate about centring the voices and experiences of frontline staff, youth and community advocates and the individuals who government programs are designed to serve.



DR DAVID FRAILE NAVARRO

I recently completed my PhD focusing on the use of natural language processing and automation in clinical medicine, specifically within primary care. My previous experience in general practice, coupled with my expertise in large language models, enabled me to examine various aspects of text automation for clinicians and their user experience with AI. My work ranged from automatically extracting information from clinical records to synthesising accurate notes from clinical conversations and summaries.

I have now joined AIHI as a postdoctoral research fellow to continue and expand my research, concentrating on the use of generative AI to revolutionise healthcare delivery.



DR MIA BIERBAUM

I recently completed my PhD with AIHI, looking at clinician perceived barriers and facilitators to oncology clinical practice guidelines in Australia. During my candidature, I won an AIHI Student Award in 2021 and 2023. Prior to my PhD, I completed a Master of Public Health, a Bachelor of Science (Biomed), and a Bachelor of Education. As a research officer at AIHI, my research included cochlear implant user experiences, and playground falls and head injury incidence rates. I have also worked at Cancer Council SA.

I am now working with Professor Peter Hibbert to evaluate a continuous improvement program aiming to reduce ambulance ramping across a local health network.



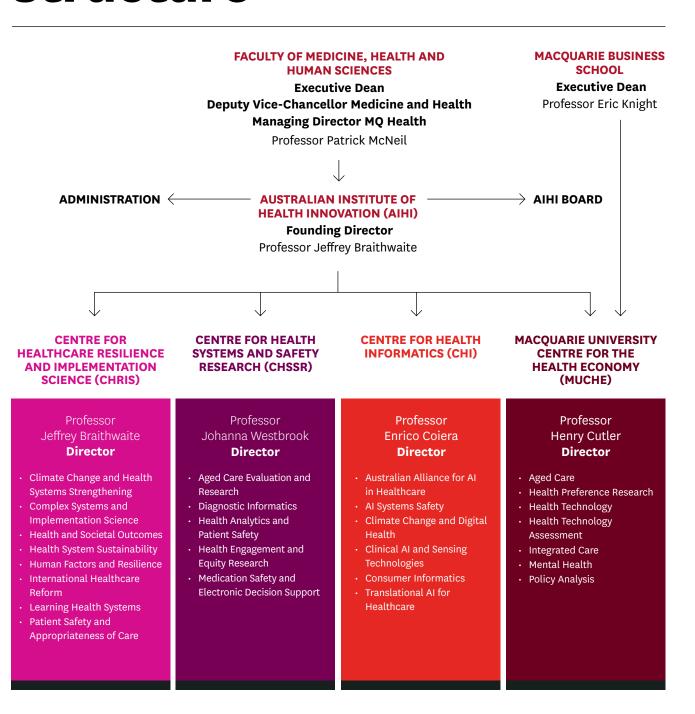
MEIMEI CHEN

As a person with a background in statistics and machine learning, I seek to explore their applications in health economics. I was fortunate to find that MUCHE and AIHI offer the perfect supervisory support and guidance needed for my research in both areas. My experience with AIHI began with my Master of Research, during which I proposed a machine learning algorithm based on multi-task learning to enhance prediction accuracy in survival analysis, ultimately benefiting the assessment of health technologies.

Now, having started my PhD, I am shifting my focus towards employing machine learning and econometric frameworks to derive unbiased causal parameters and assess patient preference heterogeneity.

I am grateful to begin my academic journey with the multidisciplinary and world-class team at AIHI, which provides not only incredible supervision and guidance but also substantial student support. MEIMEI CHEN

Organisational structure





Centre for Healthcare Resilience and Implementation Science

The world has become more worrisome than in previous eras. We can't solve all the problems in politics, international relations and climate change. But we can do what Team AIHI does very well: create, through our research, the best, most evidence-based healthcare system we can.

PROFESSOR JEFFREY BRAITHWAITE

Enhancing healthcare systems' performance poses a formidable challenge, shaped by a convergence of factors including ageing populations, resource constraints, technological advancements, and rising consumer expectations. The Centre for Healthcare Resilience and Implementation Science (CHRIS) tackles complex issues by leveraging research, incorporating evidence into practice for system enhancement, and innovating new care models. Our expertise spans complexity science, human factors, healthcare resilience, implementation science, and patient safety.

Under Professor Jeffrey Braithwaite's leadership, CHRIS is reshaping healthcare models through research that focuses on building resilient systems. Our approach involves extensive collaboration and multidisciplinary teams, ensuring that our research translates into

improved, cost-effective, and sustainable care. As an integral part of its work via the NHMRC Partnership Centre for Health System Sustainability and the NHMRC Centre of Research Excellence in Implementation Science in Oncology, CHRIS extends its reach nationally and internationally. Our long-established collaborations with prestigious entities such as the UN, WHO, OECD, ISQua, and the Society for Organisational Behaviour in Health Care contribute to global healthcare reform.

During 2023, we were the only team outside the European Union (EU) to be included in a prestigious €6 million EU Horizon grant to improve the resilience and wellbeing of aged care professionals. With our team bringing an implementation science focus, we were also awarded an NHMRC-EU Collaborative Research grant to extend the work into the Australian context.



Professor Jeffrey Braithwaite with Mr Ban Ki-moon, 8th Secretary General of the United Nations (2007–2016) and Founder of the Ban Ki-moon Foundation, at the 39th ISQua International Conference held in Seoul, South Korea, 2023.

CHRIS Streams of Research

COMPLEX SYSTEMS AND IMPLEMENTATION SCIENCE €

Professor Jeffrey Braithwaite Dr Janet Long, Dr Louise Ellis, Dr Kate Churruca

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Our Complex Systems and Implementation Science stream explores ways to capture, leverage and embrace the intricacies and multifaceted nature of healthcare. In a Complex Adaptive System, with diverse agents (patients, providers, governments) constantly interacting with each other and their environment (clinical processes, complicated technologies), an holistic approach is required to improve care. We focus on organisational culture and context and their influence on care delivery, and implementation of best practice and new treatment advances, including genomic medicine and mental health.

Three significant new grants were secured including a MRFF grant in implementation of genomic testing in primary health; a NHMRC-EU collaboration grant to build resilience in the aged care workforce; and a HCF grant on consensus-based pathways for patients undergoing common surgeries (with Macquarie University Hospital).

In key research progress, a survey of Australian consumer perspectives on digital health technologies was conducted and the MRFF Keeping Australians out of Hospital grant was concluded. An edited book, the Routledge Handbook of Climate Change and Health System Sustainability, will be released in May 2024.

HEALTH AND SOCIETAL OUTCOMES

Professor Rebecca Mitchell

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The Health and Societal Outcomes stream conducts population-level epidemiological and mixed-method research to guide improvements in health service delivery and health policy. We examine different aspects of injury and disease in the population and identify where health and social outcomes could be improved.

We developed an international consensus statement using a modified-Delphi study to aid the consistent management of hip fracture patients taking direct oral anticoagulants, published in *Anaesthesia*.

We also completed a cross-country comparison of bone protection medication prescriptions for hip fracture patients, published in *Archives of Osteoporosis*.

Our research identifying the impact of a concussion in childhood on later academic performance, was published in the journal *Concussion*.

HUMAN FACTORS AND RESILIENCE

Professor Robyn Clay-Williams

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The Human Factors and Resilience stream focusses on creating health systems that function effectively in the face of complexity and uncertainty. Our team provides a vital contribution, nationally and internationally, to understanding how healthcare systems function, and how to make them safer for patients.

We completed final validation of Cognitive Work Analysis and Functional Resonance Analysis Models of NSW hospital Emergency Departments (EDs). These models can be used to design, implement, and test new interventions in EDs to improve patient care.

We continue to advance MyED, a large 5-year MRFF funded project, working with consumers and clinicians to understand their needs and co-design new models of care that improve their outcomes and experience. The research is being conducted in Westmead, Blacktown and Mount Druitt ED's where we have completed Phase 1 data collection and analysis, including observation data, interviews with clinicians, and interviews/focus groups with CALD and older adult consumers.

Three students were awarded PhDs (Magali Goirand, Mariam Safi and Natália Ransolin), and one student was awarded an MRes (Clare McCarthy).

We were awarded Best Paper for 'An exploratory study of intensive care units' published in *Human Factors* and *Ergonomics in Manufacturing* & *Service Industries*. £1

L-R Professor Jeffrey Braithwaite, Professor Rebecca Mitchell, Professor Robyn Clay-Williams, Professor Yvonne Zurynski, Professor Peter Hibbert











INTERNATIONAL **HEALTHCARE REFORM € 1 Professor Jeffrey Braithwaite** jeffrey.braithwaite@mq.edu.au

The question at the heart of International Healthcare Reform is profound: how can we furnish toptier research evidence that countries, regardless of income levels, can effectively employ in their ongoing endeavours to reform and enhance healthcare systems?

Addressing this challenge, two distinct edited book series have been crafted. One series of six books delves into global initiatives aimed at understanding and applying ideas to sharpen resilient healthcare practices, while the other, comprising three books, explores the reform activities of 152 diverse countries.

Over 42 abstracts, posters and talks were accepted from AIHI at ISQua's 39th annual conference. The event this year was held in Seoul, South Korea, on various aspects of systems improvement and healthcare reform. Of all international research groups and agencies, AIHI is consistently the largest contributor to this prestigious international conference.

LEARNING HEALTH SYSTEMS

Professor Jeffrey Braithwaite, Professor Yvonne Zurynski, **Dr Louise Ellis**

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To do their best, clinicians, patients, policymakers, and other stakeholders require timely and relevant information. Learning Health Systems (LHS) integrate data, clinical information, test results, and patient histories with patient-reported outcomes, preferences, and experiences, placing these diverse datasets at the disposal of these decision-makers.

The LHS stream released a seminal white paper presenting the case for building the "Learning Health System 2.0" — a learning health system that is increasingly better prepared for, and adaptive to, the pressures of future pandemics and climate change. The team conducted several rapid reviews on key themes to understand how healthcare organisations can be strategically enabled to become next generation LHSs.

Working with international colleagues, our stream played an important role in the development of the International Network for Activating Learning Health Systems (INACT-LHS) Toolkit and accompanying website, and participated in the Toolkit launch and LHS workshops at the ISQua conference in Seoul. South Korea.

Stemming from our ongoing collaboration with Macquarie University General Practice, two additional papers on reinvigorating general practice as a LHS were published in the British Journal of General Practice and BMC Primary Care.

PATIENT SAFETY AND APPROPRIATENESS OF CARE 21

Professor Peter Hibbert, Professor Jeffrey Braithwaite

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The aim of the Patient Safety and Appropriateness of Care stream is to research the level of evidence-based or best practice healthcare that Australians receive. Evidence-based care means care that is in line with the recommendations in clinical guidelines. This is important because if evidence-based care is not delivered to patients reliably, they can be subject to misdiagnoses or delayed treatments. They can also suffer harm from treatments or medications they do not need.

The team commenced a NHMRC Partnership Grant working together with our partners, the Clinical Excellence Commission NSW, Clinical Excellence Queensland, Safer Care Victoria, ACT Health and the ACSQHC on a major project to develop and test evidence-based methods for healthcare organisations to improve and measure their response, analysis and learning from incidents, thereby reducing harm to patients.

We published the first paper in the world that measured the level of evidence-based care delivered to residents of aged care facilities. The paper, published in BMC Medicine, found 53% of care was delivered in line with the evidence. Six conditions (skin integrity, end-of-life care, infection, sleep, medication, and depression) had less than 50% adherence with indicators for best care.

Professors Hibbert and Braithwaite taught for Harvard University, in the International Safety, Quality, Informatics and Leadership Program on conducting patient safety investigations, and Professor Braithwaite also taught in the Leadership in Medicine: Southeast Asia Program.

CLIMATE CHANGE AND HEALTH SYSTEM STRENGTHENING **2**

Professor Jeffrey Braithwaite, Professor Yvonne Zurynski, Dr K-Lynn Smith

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The world is facing an existential problem — climate change.
But that phrase doesn't do the scale of the problem sufficient justice.
The Secretary-General of the United Nations, António Guterres, called this time we are in not a period of climate change, or global warming, but the era of "global boiling".
Healthcare has a special responsibility in this era.
The Climate Change and Health System Strengthening stream has developed multiple systematic

developed multiple systematic reviews and a seminal white paper presenting the case for building the Learning Health System 2.0 — a LHS that is increasingly better prepared for, and adaptive to, the pressures of future pandemics and climate change.

Multiple studies and systematic reviews are underway on climate change and human health. An edited book, the Routledge Handbook of Climate Change and Health System Sustainability, will be released in May 2024 and several large grants are being designed for submission. Arising from our ongoing collaborations with the OECD,

Arising from our ongoing collaborations with the OECD, ISQua, WHO and the UN, several sessions, plenaries, keynote addresses and conference symposia are under development.





Macquarie University Centre for the Health Economy

Constrained government funding, increased healthcare needs, and workforce gaps mean healthcare decision makers must extract more value from every health dollar spent. This requires greater system productivity, cost effective integrated care and funding models that promote better health outcomes. There has never been a greater need for health economic research to guide decision makers through the quagmire of reform.

PROFESSOR HENRY CUTLER

The Macquarie University Centre for the Health Economy (MUCHE) was established in 2014 to become one of Australia's leading applied health economics research centres. Since its inception, MUCHE has delivered over 100 research projects, attracted more than \$15 million in funding and contributed to research grants valued at over \$70 million.

MUCHE team members regularly contribute to policy decisions, such as through the National Suicide Prevention Office Expert Advisory Group, Independent Health and Aged Care Pricing Authority (IHACPA) Interim Aged Care Working Group, and the DoHAC Expert Advisory Panel for the Review of General Practice Incentive Programs and the Review of Primary Care After Hours Programs. MUCHE also evaluates applications for new listings on the Pharmaceutical Benefits Scheme and on the Medicare Benefits Schedule on behalf of the DoHAC.

MUCHE has developed a strong reputation for answering complex health economics research questions using a collaborative and multidisciplinary approach. MUCHE is affiliated with several other academic research centres, within and beyond Macquarie University, and collaborates on international health economics projects with world-leading research groups in the UK, Europe and China.

Further information on our research follows in the research stream highlights.



MUCHE partnered with the Black Dog Institute and Deakin University to successfully attract an NHMRC Synergy Grant worth \$5 million to explore the use of AI in the delivery of mental health treatments.



MUCHE hosted the 14th Meeting of the International Academy of Health Preference Research, one of the most prestigious conferences in the field.



MUCHE assessed the efficacy and cost of newborn bloodspot screening for X-linked adrenoleukodystrophy for the DoHAC.



MUCHE Streams of Research

AGED CARE

Professor Henry Cutler

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An aged care system that delivers high quality and respectful care is the cornerstone of a caring society. Our aged care research stream leads in aged care policy and focuses on evaluating the aged care system and government policy to improve financial sustainability, improve the role of markets, and to improve the allocation of government funding across different types of aged care. We contributed expertise to the IHACPA and to the Royal Commission into Aged Care Quality and Safety.

MUCHE explored whether recent increases in Government funded Home Care packages have substituted informal care delivered by family and friends. We had several articles accepted in leading journals on how informal carers make financial decisions for the elderly and the role of financial literacy.

As part of the IHACPA Interim Aged Care Working Group, Professor Henry Cutler provided advice to IHACPA on the development of aged care pricing methodology for residential aged care.

We hosted C-suite executives at an event to discuss what the 2023-24 Federal Budget could mean for the health and aged care sectors.

HEALTH TECHNOLOGY ASSESSMENT

Associate Professor Bonny Parkinson

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Health Technology Assessment (HTA) is the systematic evaluation of the evidence regarding the health and economic impact of a medicine, vaccine, diagnostic test, medical device or procedure. HTA aims to maximise the health of the population given resource constraints by synthesising evidence in a form that can be used by policymakers to decide whether a health intervention is value for money.

We undertake collaborative, multidisciplinary projects with the Government, healthcare organisations and leading national research groups in a broad range of fields including genomics, hearing health, and cancer.

Highlights include:

- Eight PBAC evaluations and two MSAC protocols or evaluations.
- Associate Professor Parkinson and Alicia Norman were panel members at three sessions at the Health Technology Assessment International Annual Meeting, on topics covering real world evidence in HTA, early HTA, and managing uncertainty in HTA.
- Associate Professor Parkinson was interviewed for national television on the ABC's 7.30

- Report on the health economics of medicine shortages.
- MUCHE hosted a visit by the Fudan University HTA group, China.
- Associate Professor Gu was invited to give the keynote speech at the 16th China HTA Forum in Shanghai.

HEALTH PREFERENCE RESEARCH Associate Professor Yuanyuan Gu

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We investigate healthcare stakeholder preferences, choices, and behaviour by employing stated and revealed preference techniques such as discrete choice experiments (DCEs) and economic experiments. Our primary objective is understanding individual decisionmaking processes and underlying preferences that drive healthcare choices. That includes treatment choices, healthcare service use and medication adherence, choices made by healthcare providers, and preferences for healthcare policy options. Our research seeks to improve health outcomes by providing valuable insights for designing incentives and strategies that enhance healthcare quality, access, value, and equity at a systems level.

Highlights include:

Associate Professor Gu
 co-organised and hosted the
 14th Meeting of the International
 Academy of Health Preference

L-R Professor Henry Cutler, Associate Professor Bonny Parkinson, Associate Professor Yuanyuan Gu, Associate Professor Jonas Fooken









Research, one of the most prestigious conferences in the field, and six AIHI members presented their research.

- · Associate Professor Parkinson chaired a panel discussion on data quality control methods for DCE surveys at the Australian Health Economics Society conference.
- · MUCHE collaborated with Macquarie School of Education and Macquarie Business School in a project where the DCE was adopted to design jobs for the attraction and retention of workers in the Australian early childhood education sector.

INTEGRATED CARE

Professor Henry Cutler

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An integrated healthcare system is characterised by many healthcare providers across different disciplines working together in a coordinated way, to provide a seamless care pathway for patients that aligns with their needs and preferences. Integrated care is particularly valuable for people who suffer from chronic conditions and mental ill health, given they often receive services in the community and hospital, and other non-health services that can impact outcomes.

Our integrated care stream focuses on the evaluation of integrated care models being delivered within local

health networks. We also seek to help healthcare system managers develop value-based payment models that break down traditional siloed funding structures.

Highlights include:

- · National Mental Health Commission grant to understand how to embed greater value into mental healthcare funding models and investment decisions.
- · Luminescence Alliance grant to undertake a five-year evaluation with partners of a program to provide enhanced access to child health services.
- · MRFF grant to undertake a fiveyear project with partners to evaluate a program that seeks to improve mental health and functional outcomes of Australian adults with epilepsy.
- · Professor Cutler sits on the DoHAC Expert Advisory Panel for the Review of General Practice Incentive Programs and the Review of Primary Care After Hours Programs.

MENTAL HEALTH

Associate Professor Jonas Fooken

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The cost of mental ill health to patients, communities and the healthcare system continues to rise in Australia and other developed countries. This requires a greater

understanding of the economic determinants of mental ill health and how to efficiently improve outcomes. Addressing inequities in mental healthcare is also becoming more pressing. Our mental health stream seeks to address these issues.

Together with clinical partners, we evaluate innovative care models and consumer preferences for care attributes, explore better ways to pay for mental healthcare, and use linked national datasets to assess the impact of policy on mental healthcare use and outcomes.

We are leading several government grants (e.g., National Mental Health Commission and Mental Health Commission of NSW) exploring mental healthcare funding and investment models, inequities in access to pharmaceuticals and the efficiency of preventative care. The research stream is also involved in an NHMRC Synergy grant and an NHMRC Centre for Research Excellence grant in collaboration with UNSW and Deakin University to explore preferences and outcomes within new precision treatments for depression.

Professor Cutler presented to the OECD on 'Getting more value from mental healthcare funding and financing'. Professor Cutler also served on the Expert Advisory Committee for the National Suicide Prevention Office.

Centre for Health Informatics

The next decades will challenge our health system to the core. Technologies like AI are going to be critical to building a system that is adaptive and resilient, no matter what is thrown at it.

PROFESSOR ENRICO COIERA

In a year which saw the world react to the emergence of generative AI, researchers at the Centre for Health Informatics (CHI) played a pivotal role in the national conversation on how best to take advantage of AI in building a better health system.

CHI led development of an initial discussion paper with policy advice for AI in healthcare that was tabled at a workshop hosted by Dr Norman Swan AM. This workshop assembled leaders from federal, state and territory governments, peak bodies, industry and academia. Further deliberations culminated in the release of the National Policy Roadmap for AI in Healthcare.

Researchers at CHI have been instrumental in developing the Fujitsu Macquarie AI Research Centre, the first Fujitsu Lab located in the southern hemisphere, fostering a partnership between Fujitsu and Macquarie to drive AI research in healthcare, as well as other sectors.

This year saw a number of strong research partnerships with organisations such as the Therapeutic Goods Administration (TGA), ACSQHC, Digital Health Cooperative Research Centre (DHCRC), Annalise.AI, Telstra Health, Nuvilab and BCAL Diagnostics.

2023 saw CHI launch two new research streams: Climate Change and Digital Health, with the aim of creating a more responsive and sustainable health system for future crises; and, Translational AI for Healthcare, addressing the challenges of developing and implementing real-world intelligent systems that support human decision-making.



CHI Streams of Research

AI SYSTEMS SAFETY

Professor Farah Magrabi

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Ensuring patients receive safe care from AI enabled health services is extraordinarily complex, yet it is critical to get right. Our research shows that poorly designed and implemented AI can lead to patient harm or death. To effectively incorporate AI into healthcare, its safety risks need to be understood, evaluated and monitored. Current methods are ill equipped to incorporate generative AI (e.g., ChatGPT), which dynamically adapts its behaviour as it learns.

The AI Systems Safety stream is generating new knowledge about safety risks of next generation digital health and AI technologies, revolutionising methods to monitor AI safety in healthcare.

Highlights include:

- The world's first study of the clinical safety risks of AI, including analysing six years of post-market surveillance data from the US Food and Drug Administration, was published in the number one field journal JAMIA and awarded Editor's Choice.
- In collaboration with Telstra
 Health and the DHCRC, the team
 are developing a novel digital
 clinical safety climate survey and
 improvement cycle for use in
 complex digital health settings.
- Developing a safe and responsible governance framework for AI in health services in collaboration with Alfred Health, and the DHCRC.

- Professor Magrabi co-chaired the 19th World Congress on Medical and Health Informatics, MedInfo 2023.
- Professor Magrabi was the content expert for the world's first community jury on AI in healthcare.
- Dr David Lyell was a guest on the RACP's Pomegranate Health Podcast's series on AI in medicine.
- Dr Lyell presented on AI in healthcare at the NSW Nurses and Midwives' Association Professional Day.

CLIMATE CHANGE AND DIGITAL HEALTH 1

Professor Enrico Coiera

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This research stream investigates the potential for digital solutions to help manage the health impacts of climate change by:

- Conducting comprehensive multidisciplinary syntheses of current research literature to collate existing knowledge and identify gaps;
- Delving into the lived experiences of affected communities and healthcare professionals, to gain an understanding of specific needs during climate events like floods and fires;
- Using this evidence to guide the design, development and evaluation of digital solutions.

Highlights include:

 Contribution of book chapter to the Routledge Handbook on Climate Change and Health System

- Sustainability regarding the role of digital health in climate change.
- Qualitative research is underway to investigate the lived experience and health needs of communities impacted by climate change.
- A series of systematic reviews are in progress to examine the role of digital technologies in addressing health consequences of climate change.
- Two manuscripts were submitted to peer-reviewed international journals that explored health system responses during COVID-19 to guide responses to future crises such as climate change events.
- A new PhD student and three MD students joined the team.

CLINICAL AI AND SENSING TECHNOLOGIES €

Professor Shlomo Berkovsky

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The Clinical AI and Sensing
Technologies stream focuses on
the use of AI and machine learning
for developing personalised
predictions of diagnosis and care.
The research undertaken by the
stream covers three areas:

- Clinical AI addresses emerging approaches for personalised disease treatment and prevention, taking into consideration individual variability in genes, environment, or lifestyle.
- Human-technology interaction focuses on improving human interactions (clinicians and patients) with medical technologies.

L-R Professor Farah Magrabi, Professor Enrico Coiera, Professor Shlomo Berkovsky, Associate Professor Annie Lau, Dr Sidong Liu











· Sensing and signals focuses on sensing technologies that collect rich data about human behaviour, collating insightful information to assist with monitoring medical conditions.

Highlights include:

- · Professor Berkovsky served as the General Chair of the 17th Recommender Systems Conference (RecSys) and the 28th International Conference on Intelligent User Interfaces (IUI), both ranked ERA-A (Excellence in Research for Australia ranking).
- · Publishing the paper Fraile Navarro, D, Kocaballi, AB, Dras, M & Berkovsky, S 2023, 'Collaboration, not confrontation: understanding General Practitioners' attitudes towards natural language and text automation in clinical practice', ACM Transactions on Computer-Human Interaction, vol. 30, no. 2, 29, pp. 1-34. https://doi.org/10.1145/3569893

New grants secured include:

- · Assessment of a vision-based food intake logging app, NuviLab.
- Enhancing human reasoning with generative AI: personalised digital coach for effective feedback, Fujitsu Research and Macquarie University.

CONSUMER INFORMATICS ¹ Associate Professor Annie Lau

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The Consumer Informatics team investigates the science, design, and impact of digital technologies for patients and consumers. In taking the consumer perspective, the team seeks to understand the challenges

in navigating an increasingly digitised healthcare system, and co-design solutions to improve patient experience and health outcomes.

The Consumer Informatics research stream is a collaboration of researchers, patients, consumers, and clinicians. Deep industry connections are leveraged to apply rigorous scientific methods to real world problems. We endeavour to innovatively leverage digital health to provide the best outcome for patients and consumers.

Highlights for the stream include:

- · Participant recruitment has commenced for a project to examine a virtual care initiative at a major Sydney hospital, with a focus on the patient experience.
- · Dr Tim Jackson won the CHI Rising Star Award.
- · Nida Afzal was awarded CHI Student of the Year and won the Macquarie University People's Choice Award for her 3-minute PhD presentation.
- CHI graduate research candidates are progressing well, publishing in leading international journals. Specifically, Kate Tong and Takashi Sota completed their Master of Research degrees.
- · Supervised MD students have completed their research training and manuscripts have been submitted for publication.

TRANSLATIONAL AI FOR **HEALTHCARE 1**

Dr Sidong Liu

The Translational AI research stream aims to develop intelligence systems to enhance human decision-making. Leveraging advanced analytics and machine learning, complex datasets including imaging, EHRs and multi-omics, are analysed to support clinical tasks, such as diagnosis and treatment personalisation. The team also seeks to develop novel methods and frameworks for assessing and enhancing the transportability of healthcare AI, ensuring the safe and effective integration of AI into real-world scenarios.

Highlights for the stream include:

- Dr Liu and collaborators received an NHMRC Ideas grant.
- The team experienced significant expansion in 2023, welcoming a postdoctoral research fellow and three PhD students.
- · Dr Priyanka Rana was honoured as Research Gallery Winner at the 2023 Macquarie University ECR Showcase.
- · Homay Danaei Mehr, Sahar Moradi and Somayeh Farahani were awarded in the prestigious domestic and international Macquarie University Research Excellence Scholarship Program and Cotutelle PhD scholarship program, respectively.
- Dr Liu co-edited a special issue for the journal Information, highlighting the latest advancements for AI in healthcare and medicine.
- · Dr Liu was Chair of Computer Intelligence for the 2023 International Conference on Nano Bio Intelligence.





Centre for Health Systems and Safety Research

As the technological foundations of our healthcare system evolve, our approaches to implementation, evaluation, and optimisation must evolve in tandem. By focusing on high-quality evidence, we work to ensure a future where advancements enhance patient care, safety, and efficacy.

PROFESSOR JOHANNA WESTBROOK

In settings spanning hospitals to aged care services, health information technologies support service delivery efficiency to enhance patient safety. Implementing these technologies is an intricate process, often resulting in varying degrees of disruption to healthcare delivery. Under the leadership of Professor Johanna Westbrook, the Centre for Health Systems and Safety Research (CHSSR) is addressing pivotal research questions concerning the design, utilisation, and outcomes of health information technologies. Effective information exchange, communication, and teamwork are vital components of the patient safety puzzle. Our research, facilitated by the application of sophisticated multi-method evaluation models, furnishes high-quality evidence to guide decision-making and drive transformative changes in healthcare policy and practice.

Our work continues to inform policy and practice, including:

 An NHMRC Partnership Project to co-design, implement and evaluate a National Aged Care Medication Roundtable underpinned by a learning health systems model.

- An NHMRC Partnership Project in Digital Health to establish a digital health foundation for outcomes-based diagnostic excellence, safety and value.
- Publishing the Health Innovation Series—regular bulletins with evidence-based recommendations to improve care delivery and outcomes by optimising electronic medication management systems.
- A Cancer Institute NSW Career
 Development Fellowship project to co-design quality end of life care for CALD people with cancer.
- An NHMRC Partnership Project with Anglicare to develop a dashboard of predictive analytics and decision support to drive care quality and person-centred outcomes.
- An MRFF Project that leverages informatics to optimise pharmacistled medication reviews in residential aged care settings.
- An NHMRC Partnership Project to explore virtual care integration in health systems with a focus on achieving equitable health outcomes.



CHSSR Streams of Research

AGED CARE EVALUATION AND RESEARCH €

Dr Nasir Wabe

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People using community and residential aged care services deserve high quality services that improve quality of life and health outcomes.

The goal of the Aged Care
Evaluation and Research (ACER)
team is to generate research evidence,
develop and trial interventions that
are translated to improve health
and service delivery outcomes for
people receiving residential or
community aged care.

There are four themes within ACER:

- Consumer-driven health services and informatics
- Geriatric pharmacoepidemiology and pharmacy informatics
- · Predictive and prescriptive analytics
- Chronic disease care and healthy ageing

Stream highlights include:

- Awarded a Research Acceleration Scheme grant to develop a Novel Informatics Approach for Automated Reporting of Aged Care Quality Measures.
- Five journal articles published with 13 papers under review at the end of 2023.
- Presentations at influential conferences including MedInfo 2023, the International Congress on Modelling and Simulation, the Australian Association of Gerontology.

 Developed a dashboard of key indicators and embedded decision support to guide care decisions in residential and community-based aged care settings for the NHMRC Partnership Dashboard project.

DIAGNOSTIC INFORMATICS 1 Professor Andrew Georgiou

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Diagnostic informatics encompasses major areas of research across the diagnostic analytical process. This ranges from the clinical choice of a diagnostic request, the quality and efficiency of the analytical process, right through to the interpretation and follow-up of test results and their impact on patient care outcomes.

The Diagnostic Informatics research team is committed to generating quality evidence to enhance clinical excellence, patient safety and the value of care. This involves:

- An outcomes-based approach to diagnostic research.
- Optimised clinical workflows, engagement, governance and accountability.
- Shared decision-making and patient-centred care.
- IT-enhanced decision support, data analytics and knowledge management systems.

Research findings were presented at MedInfo 2023 and at Victoria's first conference on Long COVID.

Also, Dr Abbish Kamalakkannan addressed a roundtable during Open Day at the annual WONCA International Classification Committee meeting in Australia on the challenges with defining and identifying Long COVID patients from general practice data.

HEALTH ANALYTICS AND PATIENT SAFETY €

Associate Professor Ling Li

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Information and communication technologies play a significant role in improving the efficiency, effectiveness and safety of the health system. These technologies continue to make inroads into healthcare at all levels, generating huge volumes of dynamic data from electronic health record systems. Health data analytics provides insights into these rich data.

The Health Analytics and Patient Safety team focuses on:

- Developing and applying rigorous research methods to evaluate the impact of eHealth interventions on patient safety and outcomes.
- Utilising rich dynamic electronic health record data to improve patient care delivery.
- Providing real-time information to support decisions and deliver actionable insights.

Stream highlights include:

- · Six publications on sepsis research.
- Engaging students from the MD, PhD and PACE programs in sepsis research including on the sepsis morbidity burden, and mobile health to support sepsis care and management.

L-R Professor Johanna Westbrook, Dr Nasir Wabe, Professor Andrew Georgiou, Associate Professor Ling Li, Professor Reema Harrison, Associate Professor Magda Raban













- · Publishing an article titled 'What is sepsis' in The Lighthouse for World Sepsis Day awareness.
- · Associate Professor Ling Li was awarded MQ Safety Net funding to establish sepsis surveillance using electronic health record data.
- · PhD student Khalia Ackermann placed third in the University 3 Minute Thesis competition, after winning the AIHI and Faculty rounds. Ms Ackermann also came first in the Visualise Your Thesis round at Macquarie.

HEALTH ENGAGEMENT AND EQUITY RESEARCH

Professor Reema Harrison

reema.harrison@mq.edu.au

Central to the work of the Health Engagement and Equity Research stream (formerly known as Healthcare engagement and workplace behaviours) is ensuring that healthcare staff and consumers are involved in decision-making about healthcare and the system in which it operates.

Stream highlights include:

- · The CanEngage Project concluded with three co-designed tools to enhance safety for CALD consumers accessing cancer care across NSW and Victoria.
- · A research article led by Dr Ashfaq Chauhan won the Health Services Research Association of Australia and New Zealand PhD Publication Prize.
- · CanEngage was recognised with the 2023 NSW Premier's Award for

- Improving Equitable Outcomes through Cancer Research.
- · The Medibank out-of-pocket cost and quality study was completed with findings presented at the BMJ Quality and Safety Conference and the Emerging Health Policy and Economics Research Conference.
- · Clinical Researcher, Corey Adams, discussed results of an ED noise study on national television and radio.
- · iCanCarePlan completed qualitative data collection with healthcare staff and Mandarin speaking consumers and commenced review of patient records. Dr Upma Chitkara commenced her Master of Philosophy on the project.
- · Professor Westbrook presented keynotes on interventions to reduce unprofessional behaviours to the Medical Board of Australia and the Royal College of Surgeons in Ireland at the Medical Professionalism Conference.

MEDICATION SAFETY AND ELECTRONIC DECISION SUPPORT Associate Professor Magda Raban

magda.raban@mq.edu.au

Medication error and inappropriate medication therapy are a continuing challenge to the health system across care settings. The Medication Safety and Electronic Decision Support research stream evaluates how digital technology can reduce medication errors, support medication therapy decision making and improve patient outcomes.

We conduct our research across multiple care settings, including hospitals and residential aged care. We apply mixed methods to understand technology impact, how it is used, and identify well and poorly designed system features.

Stream highlights include:

- · Awarded MRFF funds towards 'Leveraging informatics to optimise pharmacist-led medication reviews in residential aged care to improve outcomes and cost-effectiveness: a pragmatic cluster randomised controlled trial' led by Associate Professor Magda Raban and Dr Karla Seaman.
- Established a panel of consumers with lived experience of a loved one in residential aged care to advise on medication use and safety.
- · In its first 12 months, the Health Innovation Series on e-Medication Safety released 17 issues, accumulating more than 5000 downloads.
- Professor Westbrook presented on medication safety at the Global Ministerial Summit on Patient Safety, Switzerland: and the Australia and New Zealand Intensive Care Society Rapid Response, Patient Safety and Quality conference on optimising electronic systems to reduce medication errors.

NHMRC Partnership Centre for Health System Sustainability



A snapshot of five years of success (2017-2023)

921

Publications

\$143.8m

Leveraged funding

1,056

Media engagements

69

Health system collaborators

Leads

Professor Jeffrey Braithwaite Professor Enrico Coiera Professor Johanna Westbrook Professor Yvonne Zurynski The NHMRC Partnership Centre for Health System Sustainability (PCHSS) began as a \$10.75 million, five-year collaboration in 2017. Led by Professor Jeffrey Braithwaite, the Centre involved 17 lead investigators from seven universities, 20 expert advisors, and over 40 system implementation partners from around Australia. In 2022, PCHSS was granted a one-year extension until July 2023 to continue its internationally recognised research into improving health services and systems. Supported by the over \$143 million in leveraged grant funding we attracted over the five years, PCHSS investigators have expanded on the groundbreaking work initiated under the grant, publishing a substantial body of world class research.

Through three broad streams of research, the PCHSS sought to understand the challenges facing current health systems and to develop and evaluate practical, long-term solutions that are appropriate and implementable from clinical, patient, and economic perspectives.

Achievements in 2023

PCHSS researchers published over 220 peer-reviewed papers and reports in 2023. Examples of our publications include a review of the barriers and facilitators of healthcare program sustainability; a study focusing on the effect of Medicare Benefits Schedule (MBS) item changes on health provider expenditure; an exploration of Vitamin D testing in children and adolescents in primary care settings; a study that examined the effect of electronic medication management systems on paediatric prescribing errors; and a review examining models of care for older adults living in aged care facilities.

PCHSS researchers have also embarked upon projects that focus on the preparedness of health systems for future uncertainty and crises, such as climate change and pandemics. Climate change-related publications include a White Paper Learning Health Systems 2.0 that highlights what needs to be done to get to zero carbon; a discussion of the role of clinicians in tackling climate change; a scoping review of the use of digital health responses and mitigation approaches to climate change; and a review focusing on the impacts of climate change on the health workforce.

As in previous years, PCHSS received substantial media attention. Over 90 radio, television, news articles, and commentaries in the popular press covered our research in 2023. This includes articles published in The Conservation focusing on the overdiagnosis of gestational diabetes, and telehealth challenges for First Nations people, as well as articles in the Sydney Morning Herald that discussed the rise of the telehealth industry, and the use of artificial intelligence in healthcare. This extensive coverage reveals broad interest by the public in the outcomes of PCHSS's research.

PCHSS continued to work closely with system partners and collaborators, including 50 non-academic institutions and more than 60 health system and health consumer researchers. We strengthened our collaboration with health consumer organisations, such as Consumers Health Forum of Australia, Health Consumers NSW, and Rare Voices Australia, through the co-design of research, joint presentations, and new policy advocacy to support health system improvements.

PCHSS engaged extensively with stakeholders from across the health system through events and presentations. This included a showcase of PCHSS research outcomes, 'Future proofing healthcare: What the evidence

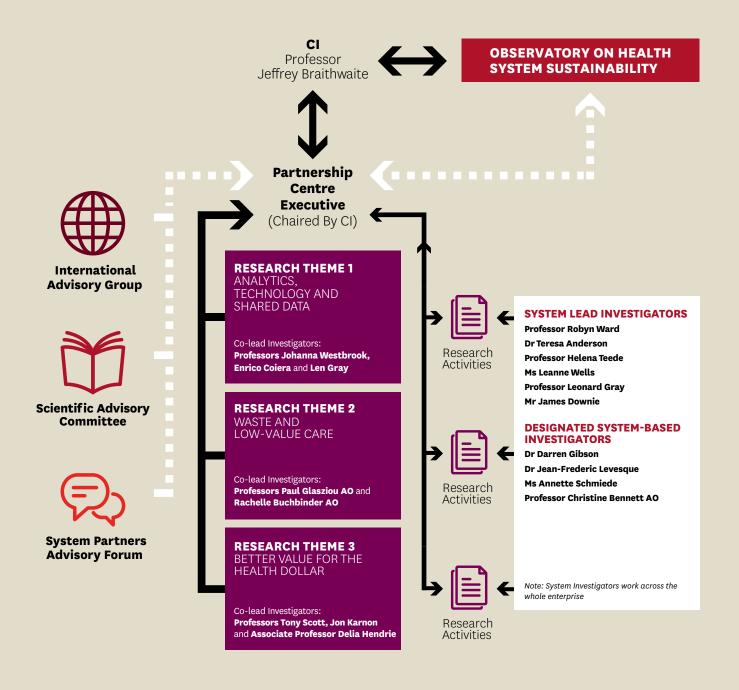
tells us about creating sustainable healthcare systems', at Macquarie University. This in-person and online hybrid event drew more than 150 attendees who participated in a simulation of the healthcare system. PCHSS celebrated its six years of success using Croakey News' @wepublichealth X (formerly, Twitter) account to share its health system-changing achievements. PCHSS research was also extensively represented at national and international conferences.

During 2023, PCHSS investigators generated over \$24 million in new leveraged funding. Examples of new grants include a project that leverages informatics to optimise medication reviews and outcomes in residential aged care; the establishment of a musculoskeletal clinical trial network in Australia and New Zealand; and a project focused on reducing hospital readmission for high-risk cardiology patients.

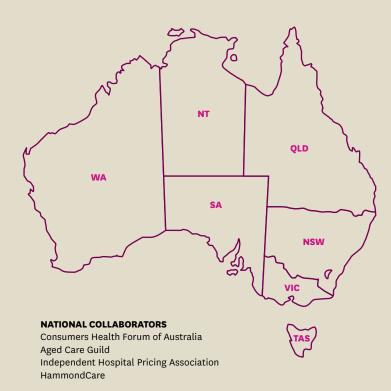
PCHSS researchers continued to be recognised for excellence in their field of research and Professor Rachelle Buchbinder AO was awarded the 2023 Australian Rheumatology Association Distinguished Service Medal.

Governance authority

NHMRC and funding partners



PCHSS Lead Investigators and Partner Organisations



WESTERN AUSTRALIA

A/Prof Delia Hendrie RL Prof Elizabeth Geelhoed RL Dr Darren Gibson RL WA Dept of Health*

NORTHERN TERRITORY

Dept of Health, NT*

SOUTH AUSTRALIA

Prof Jon Karnon RL PHN Country SA* PHN Adelaide*

VICTORIA

Prof Tony Scott RL
Prof Rachelle Buchbinder AO RL
Prof Helena Teede RL
Circle Health*
Monash Partners*
Dept of HHS Victoria*
PHN South Eastern
Melbourne*
Cabrini Health*

TASMANIA

University of Tasmania* Dept of HHS Tasmania* PHN Primary Health Tasmania*

QUEENSLAND

Prof Paul Glasziou AO RL Prof Leonard Gray RL Prof Robyn Ward AM RL Metro South Health* Queensland Health* PHN Brisbane South* James Cook University*

NEW SOUTH WALESProf Jeffrey Braithwaite CIA

Prof Enrico Coiera RL
Prof Johanna Westbrook RL
Dr Teresa Anderson RL
Dr Jean-Frédéric Levesque RL
Mr George Leipnik RL
Mr James Downie RL
Prof Christine Bennett AO RL
Ms Annette Schmiede RL
Sydney LHD and Sydney
Health Partners*
Macquarie University Hospital*
PHN Sydney North
Health Network*

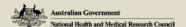
ACT

Ms Leanne Wells RL ACT Health*

CIA - Chief investigator first listed RL - Research lead investigator

* System-based implementation partner organisation

FUNDING PARTNERS











The Governance Authority for the PCHSS comprises representatives of the NHMRC and its Funding Partners: Bupa Health Foundation, NSW Health, University of Notre Dame, and the Western Australia Department of Health.



NHMRC Centre of Research Excellence

IN DIGITAL HEALTH

The NHMRC Centre of Research Excellence (CRE) in Digital Health is a national research centre which brings together the major Australian centres of health informatics research.

Administered by the Centre for Health Informatics, the CRE in Digital Health focuses on healthcare data and AI tools and techniques.

Working with our partners, collaborators and front-line healthcare providers, the CRE in Digital Health addresses key issues to drive the development of a fully integrated and digitally enabled Australian healthcare system.

Investigators in the CRE come from Macquarie University, Bond University, the University of Melbourne, RMIT University, UNSW, University of South Australia, University of Sydney and CSIRO.

SYSTEMATIC REVIEWS

A 2-week systematic review (2weekSR) is a full systematic review completed in a vastly accelerated timeframe, whilst using standard systematic review methodology. 2weekSRs are made possible by utilising systematic review automation (SRA) tools and agile development processes.

In 2023, methodologies for the 2weekSR and 2weekScR (2-week scoping review), which had been developed in 2022, were disseminated across the collaboration of clinicians, researchers, and a consumer through a series of workshops held at AIHI.

As part of this program Associate Professor Anna Scott, working with Professor Paul Glasziou AO at Bond University, conducted a one hour lecture at AIHI, followed by a workshop.

PUBLICATIONS

In June the Medical Journal of Australia published "We need to chat about artificial intelligence", a perspective article authored by Professor Enrico Coiera, Professor Karin Verspoor and Dr David Hansen, exploring the implications of AI technology on healthcare, considering the preparedness of the Australian healthcare system to respond to the opportunities and risks generated by AI. doi: 10.5694/mja2.51992

In September the Internal
Medicine Journal published
"Artificial Intelligence in medicine:
has the time come to hang up the

stethoscope?" by Professor Farah Magrabi and Dr David Lyell from Macquarie University.

In November Professor Enrico Coiera launched a National Policy Roadmap for Artificial Intelligence in Healthcare, co-led by Professor Karin Verspoor, Dr David Hansen and Professor Farah Magrabi and produced by the Australian Alliance for Al in Healthcare.

CHIEF INVESTIGATORS

Professor Enrico CoieraAIHI, Macquarie University

Professor Paul Glasziou AOBond University

Professor William Runciman University of South Australia

Dr David Hansen

CSIRO Australian e-Health Research Centre

Emeritus Professor Teng Liaw University of New South Wales

Professor Farah MagrabiAIHI, Macquarie University

Professor Vitali Sintchenko University of Sydney

Professor Karin Verspoor University of Melbourne

Associate Professor Blanca Gallego-Luxan

University of New South Wales

Associate Professor Annie Lau AIHI, Macquarie University



Dr Norman Swan AM with co-founders of the Australian Alliance for AI in Healthcare, Dr David Hansen, Professor Enrico Coiera and Professor Karin Verspoor, at the launch of the National Policy Roadmap for AI in Healthcare.



NHMRC Centre of Research Excellence

IN IMPLEMENTATION SCIENCE IN ONCOLOGY

The NHMRC Centre of Research Excellence in Implementation Science in Oncology (CRE-ISO), running from 2018-2023, focused on issues relating to patient experience and the implications of the introduction of novel therapies on service provision and patient experience.

CRE-ISO's initial work identified, through in situ observation following data review, rapidly increasing demand for outpatient service provision arising from an ever-increasing range of therapeutic options and increasing patient survival. This context inspired several projects to develop a series of approaches to research the rapidly changing service provision context and the way patients experience it.

CRE-ISO is led by Professor Jeffrey Braithwaite alongside Dr Gaston Arnolda. The research team of Dr Gaston Arnolda and Dr Klay Lamprell had a highly productive year with eight studies published and four additional studies under peer review.

Four studies looked at different aspects of cancer experience of patients with colorectal cancer, one focussing on patient-written reports and the other two using data from the UK Cancer Patient Experience Survey. This work was highlighted by Bowel Cancer Australia as part of its 2023 campaign, and Dr Arnolda accompanied the organisation and 50 young colorectal cancer patients to Canberra to attend parliament and meet with political representatives as part of Bowel Cancer Australia's now successul advocacy for a reduction in the age of colorectal cancer screening.

Two of the 2023 studies grew out CRE-ISO's participation in the Enduring Cancer Data Linkage (CanDLe) project, focusing on end-of-life care and health service use trajectories of cancer patients diagnosed with depression. As CanDLe steering group rules only permit discussion of one project at a time, and CRE-ISO had five

projects planned, we continued to participate in CanDLe but shifted to using linked data where no such restrictions exist. These CanDLe / CHEREL projects are led by or conducted under the guidance of Professor Rebecca Mitchell.

The NSW CRE-ISO team also contributed to a separate study protocol by the South Australian CRE-ISO team.

Other 2023 studies focused on a variety of matters: two focused on cancer clinicians' views of clinical practice guidelines; two focused on skin cancer care in primary care; and one focused on qualitative studies of patients considering or receiving immunotherapy.

Six further projects will be submitted to peer review, to complete CRE-ISO, including: three additional publications using linked data; two additional publications relating to patient experience; and a publication exploring the views of chairs of cancer multidisciplinary teams on what is needed to optimise team meetings.







Professor Jeffrey Braithwaite, Dr Gaston Arnolda and Dr Klay Lamprell

Issue 21 / 13 June 2023



Young people with undiagnosed bowel cancer report needing to selfadvocate for diagnosis

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Bowel cancer incidence rates up 266% among 15-24-year-olds

Research has found age bias as a perceived barrier to getting a diagnosis for the deadly cancer – but a GP expert says there are other factors.

WNEWS

Early-onset bowel cancer on the rise as 26yo Victorian man gets surprising diagnosis

ABC Ballarat / By Niamh Sutton Posted Thu 31 Aug 2023 at 11 55am



CHIEF INVESTIGATORS

Professor Jeffrey Braithwaite

AIHI, Macquarie University

Professor Johanna Westbrook

AIHI, Macquarie University

Professor Robyn Ward AM

University of Sydney

Professor David Currow

University of Wollongong

Professor Geoff Delaney

South-Western Sydney LHD

Professor Richard Kefford AM

Macquarie University

Professor Ian Olver AM

University of Adelaide

Professor Jonathan Karnon

Flinders University

Professor Phil Crowe

University of New South Wales

Associate Professor

Winston Liauw

South-Eastern Sydney LHD

Graduate research program

2023 HIGHLIGHTS



PhD

52 Candidates 8 Awarded



MRes

9 Candidates3 Awarded

REAL WORLD LEARNING WITH PACE

The multi-award-winning PACE (Professional and Community Engagement) program at Macquarie University supports undergraduate students with authentic workplace experiences. During 2023, AIHI hosted 25 PACE students, placing them alongside academics and professional staff to participate in projects ranging from medical informatics to medication safety.

The Australian Institute of Health Innovation proudly presents two distinguished Graduate Research programs for higher degree research students, offering a collaborative learning experience alongside internationally renowned researchers. Our Institute comprises leaders in health innovation, providing unparalleled supervision and responsive guidance to students. AIHI's research initiatives benefit from extensive collaborations with healthcare organisations, further bolstered by the support of MQ Health and Macquarie University Hospital—Australia's most technologically advanced private hospital situated on a university campus. We also encourage high-calibre candidates to explore scholarship opportunities.

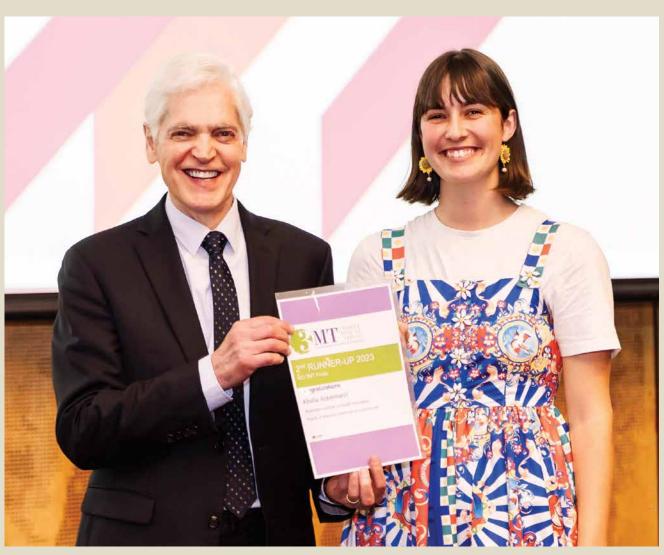
MASTER OF RESEARCH

The Master of Research (MRes) program empowers candidates to delve into their areas of interest, fostering a foundation for a future research career, especially next-generation doctoral studies.

DOCTOR OF PHILOSOPHY

The Doctor of Philosophy (PhD) is an esteemed, high-level degree recognising research accomplishments showcasing the candidate's ability to independently conduct research. Demonstrating a unique contribution to the subject, this degree signifies coherence and originality through the discovery of new facts or the application of independent critical thinking. Each candidate benefits from the guidance of a minimum of two dedicated supervisors throughout their program.

Explore detailed program information and discover inspiring profiles of our accomplished PhD and MRes graduates on our website £1.



Professor Sakkie Pretorius, Deputy Vice-Chancellor, Research, presents PhD candidate Khalia Ackermann with the second runner-up award for the Macquarie University 3 Minute Thesis competition.

We are extremely proud of the outstanding candidates in our Graduate Research program and offer a special congratulations to the following who were awarded during 2023:

PhD

Dr Ashfaq Chauhan Dr Hossai Gul Dr Antoinette Pavithra Dr Thomas Bowden Dr Belinda-Jane St Clair-Fenech Dr Magali Goirand Ampaire Dr Mia Bierbaum Dr David Fraile Navarro

MRes2

James Du Preez Claire McCarthy Takashi Sota



Doctor of Medicine Research Program

Leads

Professor Frances Rapport (to November 2023)

Professor Robyn Clay-Williams (from November 2023)

Associate Professor Veronica Preda

Macquarie University's Doctor of Medicine (MD) Program encourages MD students to expand their clinical knowledge and understanding of how medical evidence is created through a discrete, 18 month research project. At the end of the project, students will have produced a publication-ready manuscript

and presented their research at a symposium-style forum to enhance both their written and oratory skills.

At Macquarie University, MD students learn how to observe and act on the signs and symptoms of disease while also appreciating the value of keeping up to date with the research evidence through literature appraisal.



The program, which is run by AIHI for the Faculty of Medicine, Health and Human Sciences, prides itself in offering innovative yet practical projects that develop students' research and time-management skills—skills that will be of value throughout their careers.

AIHI has a committed team overseeing the MD students' projects and providing research supervision. With four cohorts already under its belt, AIHI supported a further 60 MD students in successfully graduating from the MD Research Program in 2023.





Awards and recognition

IN NEW FELLOWSHIPS

Professor Johanna Westbrook was inducted as a Fellow of the Australian Academy of Health and Medical Sciences.

Professor Reema Harrison was awarded the 2023 Deeble Institute Fellowship to examine voluntary patient registration reforms and equitable access to healthcare.

IN NEW APPOINTMENTS

Professor Henry Cutler was appointed to the DoHAC Expert Advisory Panel for the Review of General Practice Incentive Programs and the Review of Primary Care After Hours Programs. Professor Cutler was also appointed as Chair of the Research Australia Health Economics Working Group and as Visiting Research Fellow within the Health Economics Research Centre, Nuffield Department of Population Health, University of Oxford, UK.

IN PRIZES

Khalia Ackermann won the Macquarie round of the international Visualise Your Thesis competition.

Dr Ashfaq Chauhan received the Health Services Research Association of Australia and New Zealand award for the Policy Research Paper of the Year and the Professor Marager Kelaher Best PhD Paper Award £.

Dr Rajendra Gyawali received the UNSW Dean's Award for Outstanding PhD Thesis.

Dr Karen Hutchinson won the Best Paper Award at the Asia Pacific Integrated Care Conference 2023.

Julie Li won the Best Poster Award at the Context Sensitive Health Informatics conference.

IN RECOGNITION

Professor Reema Harrison received the NSW Premier's Award for Outstanding Cancer Research for Improving Equitable Outcomes through Cancer Research for the CanEngage project.

Professor Andrew Georgiou was a finalist for the Diana Forsythe Award by the Awards Committee and People and Organizational Issues Working Group of the American Medical Informatics Association.

Isabelle Meulenbroeks received the 2023 Deeble Institute for Health Policy Research Scholarship.

IN MACQUARIE UNIVERSITY AWARDS

Khalia Ackermann placed second runner-up in the University 3 Minute Thesis competition, after winning the AIHI and Faculty rounds.

Dr Elizabeth Austin won the Spirit of EnCouRage MQ Faculty Citizen Award.

Dr Samantha Spanos won the Early Career Researcher (ECR) 10 minute Oral Presentation Award at the 8th Annual EnCouRage MQ ECR Symposium.

Dr Anam Bilgrami was a Highly Commended Finalist for ECR of the Year (Humanities, Arts and Social Sciences).

Dr Ashfaq Chauhan received the University ECR Showcase Impact Award for his research proposal on examining the impact of the 'Making-it-Meaningful' medication discharge tool.

Professor Henry Cutler, Associate
Professor Yuanyuan Gu, Dr Anam
Bilgrami, Ms Mona Aghdaee,
Mr Andrew Partington and
colleagues were awarded the 2023
Macquarie Business School Impact
Story Prize for 'Improving the
Australian aged care system through
robust and policy-relevant research'.

Professor Reema Harrison was a highly commended finalist in the University Vice Chancellor's Award for Research Integrity and received a University Lighthouse Program award for enablement of the team.



Image: Julie Li receiving the Best Poster Award at the Context Sensitive Health Informatics conference from conference committee member Professor Melissa Baysari.

2023 awards



RESEARCHER OF THE YEAR

CHRIS

Professor Peter Hibbert

СНІ

Professor Farah Magrabi Professor Shlomo Berkovsky

CHSSR

Professor Reema Harrison

MUCHE

Dr Anam Bilgrami



PUBLICATION PRIZE

CHRIS

Dr Louise Ellis

СНІ

Dr David Lyell

CHSSR

Associate Professor Magda Raban

MUCHE

Associate Professor Yuanyuan Gu



RISING STAR

CHRIS

Dr Reidar Lystad

CHI

Dr Tim Jackson

CHSSR

Dr Rajendra Gyawali Dr Ryan McMullan

MUCHE

Elizabeth Seil



STUDENT PRIZE

CHRIS

Dr Mia Bierbaum

CHI

Nida Afzal

CHSSR

Khalia Ackermann

MUCHE

Noura Saba



PROFESSIONAL EXCELLENCE

CHRIS

Elle Leask, Romika Patel, Lieke Richardson, Christina Rojas, Maree Saba, Shalini Wijekulasuriya

CHI

Pippa Dorricott

CHSSR

Erin Fitzpatrick and Alison Merchant

MUCHE

Chrissy Clay

Symposia



Ms Carolyn Hoffman, Chief Executive Officer at Institute for Safe Medication Practices Canada, visited AIHI during 2023.

AIHI recognises the importance of exchanging ideas, promoting innovative research, and endorsing calls to action that spark debate and contribute to the enhancement of health systems both in Australia and around the world. AIHI runs in person seminars as well as the AIHI Webinar Series each of which have garnered international audiences, showcasing popular presentations by esteemed researchers and clinicians, and fostering a platform for valuable insights and discussion.

Following is a selection of our recent webinars and all recordings are available on AIHI YouTube.



Scan the QR code to visit our AIHI YouTube channel.

TOWARD HEALTHCARE IMPROVEMENT

In this webinar, speakers from AIHI are joined by Professor Trish Greenhalgh OBE, General Practitioner and Professor of Primary Care Health Sciences at the University of Oxford, UK, to discuss aspects of healthcare improvement including 'Patient safety in remote primary care encounters—what can we learn from incident reports and ethnography'.

CAN WE HAVE A BETTER HEALTH SYSTEM TO 2030

How might healthcare unfold around the world, by 2030? What are the demands on the system and where are the opportunities for health systems to improve care for communities under increasing pressure? In this webinar, Professor Jeffrey Braithwaite explores what healthcare will look like in 2030.

LONG COVID—UTLISING REAL-TIME ELECTRONIC **GP DATA**

Up to 10% of people who have had COVID-19 may continue to experience symptoms for more than three months with a condition known as Long COVID. Professor Andrew Georgiou is joined by Associate Professor Christopher Pearce, Research Director, Aurora Primary Care Research Institute, to discuss an Australian first initiative into how Long COVID can be best managed in general practice.

WHAT IMPLEMENTATION SCIENCE CAN OFFER **PATIENT SAFETY**

Professor Jeremy Grimshaw, Senior Scientist in the Clinical Epidemiology Program, Ottawa Health Research Institute and Full Professor in the Department of Medicine, University of Ottawa, joined AIHI researchers for this seminar exploring implementation science.

CHANGES IN THE ASSESSMENT OF MEDICINES AT NICE

Speakers from the National Institute for Health and Care Excellence (NICE), England, and MUCHE discuss recent changes in the assessment of medicines at NICE.

Publications

1 JANUARY TO 31 DECEMBER 2023

Book

chapters

Edited

book

Book

chapters conference

Peer reviewed journal articles

Letters to the editor and

editorials

Full conference papers

Conference

abstracts or

posters

Commissioned reports

EDITED BOOK

Bamgboje-Ayodele, A, Prgomet, M, Kuziemsky, C, Elkin, P & Nohr, C (eds) 2023, Context sensitive health informatics and the pandemic boost: All systems go! Studies in Health Technology and Informatics, vol. 304, IOS Press, Amsterdam.

BOOK CHAPTERS

- Braithwaite, J, Churruca, K, Hibbert, P & Clay-Williams, R 2023, At the heart of getting things done in complex healthcare ecosystems: leadership, strategy, sensemaking and sensegiving. in N Chambers (ed.), Research handbook on leadership in healthcare. Edward Elgar Publishing, Cheltenham, UK, pp. 775-792.
- Clay-Williams, R & Cartmill, J 2023, Patient safety in surgery: strategies to achieve the best outcome in the high-risk surgical patient. in P Aseni, A Massimiliano Grande, A Leppäniemi & O Chiara (eds), The high-risk surgical patient. Springer, Springer Nature, Cham, pp. 197-202. https://doi. org/10.1007/978-3-031-17273-1_16
- Goirand, M, Austin, E & Clay-Williams, R 2023, A systems approach to implementing ethics in a COVID-19 AI application: a qualitative study. in P Ordónez de Pablos & X Zhang (eds), Accelerating strategic changes for digital transformation in the healthcare industry. vol. 2, Information Technologies in Healthcare Industry, vol. 2, Elsevier Academic Press, London, pp. 201-218. https://doi. org/10.1016/B978-0-443-15299-3.00011-7
- Lamprell, K 2023, Healthcare hero journeys. in Encyclopedia of heroism studies. Springer Healthcare, Springer Nature.
- Long, JC, Churruca, K & Ellis, LA 2023, Social network methods and global health. in P Liamputtong (ed.), Handbook of social sciences and global public health. Springer, Springer Nature, Cham, pp. 1-19. https://doi. org/10.1007/978-3-030-96778-9_67-1
- Magrabi, F, Cresswell, K & Fraser, HSF 2023, International dimensions of clinical decision support systems. in RA Greenes & G Del Fiol (eds), Clinical decision support and beyond: progress and opportunities in knowledge-enhanced health and healthcare. 3rd edn, Elsevier Academic Press, London, pp. 145-188. https://doi.org/10.1016/B978-0-323-91200-6.00013-9
- Purchase, T, Bowie, P, Hibbert, P, Krishnan, RG & Carson-Stevens, A 2023, Human factors to improve patient safety. in A Agrawal & J Bhatt (eds), Patient safety: a case-based Innovative playbook for safer care. Second edn, Springer, Switzerland, pp. 45-60. https://doi. org/10.1007/978-3-031-35933-0_4
- Wong, S, Sadow, L, Waniganayake, M, Zurynski, Y, Amin, J, Bull, R, Dahm, MR, Degotardi, S, Donovan, MJ, Hadley, F & Harrison, LJ 2023, The leadership role of Australian early childhood organisations in communicating health information during COVID-19: lessons from elite interviews. in E Fonsén, R Ahtiainen, K-M Heikkinen, L Heikonen, P Strehmel & E Tamir (eds), Early childhood education leadership in times of crisis: international studies during the COVID-19 pandemic. Verlag Barbara Budrich, Opladen, Germany, pp. 135-150.

BOOK CHAPTERS - CONFERENCE

Yang, L, Mehta, D, Liu, S, Mahapatra, D, Di Ieva, A & Ge, Z 2023, 'TPMIL: Trainable Prototype enhanced Multiple Instance Learning for whole slide image classification', Paper presented at Medical Imaging with Deep Learning 2023, Nashville, 10/07/23 - 12/07/23 pp. 1-11. https://openreview. net/forum?id=P3tSZhxBwJw

PEER REVIEWED JOURNAL ARTICLES

- Abiona, O & Ajefu, JB 2023, 'The impact of timing of in utero drought shocks on birth outcomes in rural households: $evidence\ from\ Sierra\ Leone',\ Journal\ of\ Population$ Economics, vol. 36, no. 3, pp. 1333-1362. https://doi. org/10.1007/s00148-022-00926-w
- Abiona, O 2024, 'Weather shocks, birth and early life health: Evidence of different gender impacts', Journal of African Economies, vol. 33, no. 1, pp. 46-66. https://doi. org/10.1093/jae/ejac031
- Adams, C, Bert, J, Ferguson, R, Helsham, K, Son, M & Brown, A 2023, 'Partnering with healthcare: the experiences of consumer representatives', Patient Experience Journal, vol. 10, no. 1, 2, pp. 4-9. https://doi.org/10.35680/2372-0247.1819
- Adams, C, Harrison, R, Iqbal, MP, Schembri, A & Walpola, R 2024, 'From detractors to promoters: a comparative analysis of patient experience drivers across Net Promoter Score subcategories', International Journal of Nursing Practice, vol. 30, no. 1, e13197, pp. 1-9. https://doi.org/10.1111/ijn.13197
- Adams, C, Schembri, A, Chauhan, A, Walpola, R & Harrison, R 2023, 'Differences in patient experiences among people from ethnic minority backgrounds: a comparative analysis of HCAHPS results', Journal of Patient Experience, vol. 10, pp. 1-6. https://doi.org/10.1177/23743735231218867
- Adams, C, Walpola, R, Schembri, A & Harrison, R 2024, 'The HUSH Project: using codesign to reduce sleep disruptions for patients in hospital', Health Expectations, vol. 27, no. 1, e13881, pp. 1-7. https://doi.org/10.1111/ hex.13881
- Adams, C, Walsan, R, McDonnell, R & Schembri, A 2023, 'As loud as a construction site: noise levels in the emergency department', Australasian Emergency Care. https://doi. org/10.1016/j.auec.2023.07.004
- Aghdaee, M, Gu, Y, Sinha, K, Parkinson, B, Sharma, R & Cutler, H 2023, 'Mapping the Patient-Reported Outcomes Measurement Information System (PROMIS-29) to EQ-5D-5L', PharmacoEconomics, vol. 41, no. 2, pp. 187-198. https://doi. org/10.1007/s40273-022-01157-3
- Ahumada-Canale, A, Jeet, V, Bilgrami, A, Seil, E, Gu, Y & Cutler, H 2023, 'Barriers and facilitators to implementing priority setting and resource allocation tools in hospital decisions: A systematic review', Social Science and Medicine, vol. 322, 115790, pp. 1-22. https://doi.org/10.1016/j. socscimed.2023.115790
- 10. Arora, M, Pozzato, I, McBain, C, Tran, Y, Sandalic, D, Myles, D, Middleton, JW & Craig, A 2023, 'Cognitive reserve and its association with cognitive and mental health status following an acute spinal cord injury', Journal of Clinical Medicine, vol. 12, no. 13, 4258, pp. 1-12. https://doi.org/10.3390/ jcm12134258
- Aunger, JA, Maben, J, Abrams, R, Wright, JM, Mannion, R, Pearson, M, Jones, A & Westbrook, JI 2023, 'Drivers of unprofessional behaviour between staff in acute care hospitals: a realist review', BMC Health Services Research, vol. 23, no. 1, 1326, pp. 1-22. https://doi.org/10.1186/s12913-023-10291-3
- 12. Austin, EE, Lanos, N, Hutchinson, K, Barnes, S, Pulido, DF, Ruane, C & Clay-Williams, R 2023, 'Groundhog Day in the emergency department: a systematic review of 20 years of news coverage in Australia', PLoS ONE, vol. 18, no. 5 May, e0285207, pp. 1-18. https://doi.org/10.1371/journal. pone.0285207

- 13. Bagot, KL, McInnes, E, Mannion, R, McMullan, RD, Urwin, R, Churruca, K, Hibbert, P & Westbrook, JI 2023, 'Middle manager responses to hospital co-workers' unprofessional behaviours within the context of a professional accountability culture change program: a qualitative analysis', BMC Health Services Research, vol. 23, no. 1, 1012, pp. 1-13. https://doi.org/10.1186/s12913-023-09968-6
- 14. Barratt, M, Jorgensen, M, Deb, S, Limbu, B, Donley, M, Buchholtz, M, Smith, V & Wilson, N 2023, 'Staff perceptions following a training programme about reducing psychotropic medication use in adults with intellectual disability: the need for a realistic professional practice framework', *Journal of Applied Research in Intellectual Disabilities*, vol. 36, no. 3, pp. 486-496. https://doi.org/10.1111/jar.13070
- Baysari, MT, Dort, BAV, Stanceski, K, Hargreaves, A, Zheng, WY, Moran, M, Day, R, Li, L, Westbrook, J & Hilmer, S 2023, 'Is evidence of effectiveness a driver for clinical decision support selection? A qualitative descriptive study of senior hospital staff', *International Journal for Quality in Health Care*, vol. 35, no. 1, mzadoo4, pp. 1-6. https://doi.org/10.1093/intqhc/mzadoo4
- Bekele Okuba, T, Lystad, RP, Boisvert, I, McMaugh, A, Moore, RC, Walsan, R & Mitchell, RJ 2023, 'Cochlear implantation impact on health service utilisation and social outcomes: a systematic review', BMC Health Services Research, vol. 23, no. 1, 929, pp. 1-23. https://doi.org/10.1186/ s12913-023-09900-y
- 17. Berkovsky, S & Coiera, E 2023, 'Moving beyond algorithmic accuracy to improving user interaction with clinical Al', *PLOS Digital Health*, vol. 2, no. 3, e0000222, pp. 1-3. https://doi.org/10.1371/journal.pdig.0000222
- Berlowitz, DJ, Mathers, S, Hutchinson, K, Hogden, A, Carey, KA, Graco, M, Whelan, B-M, Charania, S, Steyn, F, Allcroft, P, Crook, A & Sheers, N 2023, 'The complexity of multidisciplinary respiratory care in Amyotrophic Lateral Sclerosis', *Breathe*, vol. 19, no. 3, 220269, pp. 1-17. https:// doi.org/10.1183/20734735.0269-2022
- 19. Best, S, Long, JC, Braithwaite, J & Taylor, N 2023, 'Standardizing variation: scaling up clinical genomics in Australia', Genetics in Medicine, vol. 25, no. 2, 100109. https://doi.org/10.1016/j.gim.2022.01.004
- Best, S, Long, JC, Fehlberg, Z, Archibald, AD & Braithwaite, J 2023, 'Supporting healthcare professionals to offer reproductive genetic carrier screening: a behaviour change theory approach', Australian Journal of Primary Health, vol. 29, no. 5, pp. 480-489. https://doi.org/10.1071/PY23022
- Best, S, Long, JC, Fehlberg, Z, Taylor, N, Ellis, LA, Boggs, K & Braithwaite, J 2023, 'Using a theory informed approach to design, execute, and evaluate implementation strategies to support offering reproductive genetic carrier screening in Australia', BMC Health Services Research, vol. 23, no. 1, 1276, pp. 1-12. https://doi.org/10.1186/s12913-023-10053-1
- 22. Best, S, Long, JC, Fehlberg, Z, Theodorou, T, Hatem, S, Archibald, A & Braithwaite, J 2023, 'The more you do it, the easier it gets: using behaviour change theory to support health care professionals offering reproductive genetic carrier screening', European Journal of Human Genetics, vol. 31, no. 4, pp. 430-444. https://doi.org/10.1038/s41431-022-01224-5
- 23. Bierbaum, M, Arnolda, G, Braithwaite, J & Rapport, F 2023, 'Clinician attitudes towards cancer treatment guidelines in Australia', *BMC Research Notes*, vol. 16, no. 1, 80, pp. 1-10. https://doi.org/10.1186/s13104-023-06356-5

- 24. Bierbaum, M, Rapport, F, Arnolda, G, Tran, Y, Nic Giolla Easpaig, B, Ludlow, K, Clay-Williams, R, Austin, E, Laginha, B, Lo, CY, Churruca, K, van Baar, L, Hutchinson, K, Chittajallu, R, Owais, SS, Nullwala, R, Hibbert, P, Fajardo Pulido, D & Braithwaite, J 2023, 'Rates of adherence to cancer treatment guidelines in Australia and the factors associated with adherence: a systematic review', Asia-Pacific Journal of Clinical Oncology, vol. 19, no. 6, pp. 618-644. https://doi.org/10.1111/ajco.13948
- 25. Bizuayehu, HM, Dadi, AF, Hassen, TA, Ketema, DB, Ahmed, KY, Kassa, ZY, Amsalu, E, Kibret, GD, Alemu, AA, Alebel, A, Shifa, JE, Assefa, Y, Tessema, GA, Sarich, P, Gebremedhin, AF & Bore, MG 2023, 'Global burden of 34 cancers among women in 2020 and projections to 2040: population-based data from 185 countries/territories', *International Journal of Cancer*. https://doi.org/10.1002/ijc.34809
- Bleckly, F, Matthews, N & Lo, CY 2023, 'Identity change of late-deafened adults after receiving cochlear implants', Disability and Rehabilitation: Assistive Technology. https:// doi.org/10.1080/17483107.2023.2198565
- 27. Braithwaite, J & Fisher, G 2023, 'Beyond the aspirational: Creating the future of health care in Australia', *Internal Medicine Journal*. https://doi.org/10.1111/imj.16286
- 28. Burns, K, Schroeder, L, Fung, T, Ellis, LA & Amin, J 2023, 'Industry differences in psychological distress and distressrelated productivity loss: a cross-sectional study of Australian workers', *Journal of Occupational Health*, vol. 65, no. 1, e12428, pp. 1-16. https://doi.org/10.1002/1348-9585.12428
- 29. Carr, NR, Olsen, KN & Thompson, WF 2023, 'The perceptual and emotional consequences of articulation in music', *Music Perception*, vol. 40, no. 3, pp. 202-219. https://doi.org/10.1525/MP.2023.40.3.202
- 30. Carrigan, A, Austin, E, Clay-Williams, R, Hibbert, PD, Maka, K, Holden, N, Grigg, S, Loy, G & Braithwaite, J 2023, 'Birang Daruganora: a protocol for a qualitative study to elicit Aboriginal and Torres Strait Islander community views about cultural needs and experiences for a new Australian health facility', BMJ Open, vol. 13, no. 4, e069951, pp. 1-6. https://doi.org/10.1136/bmjopen-2022-069951
- Carrigan, A, Roberts, N, Clay-Williams, R, Hibbert, P, Austin, E, Pulido, DF, Meulenbroeks, I, Nguyen, HM, Sarkies, M, Hatem, S, Maka, K, Loy, G & Braithwaite, J 2023, 'What do consumer and providers view as important for integrated care? A qualitative study', BMC Health Services Research, vol. 23, no. 1, 11, pp. 1-11. https://doi.org/10.1186/ s12913-022-08997-x
- Carrigan, A, Roberts, N, Han, J, John, R, Khan, U, Sultani, A & Austin, EE 2023, 'The digital hospital: a scoping review of how technology is transforming cardiopulmonary care', Heart Lung and Circulation, vol. 32, no. 9, pp. 1057-1068. https:// doi.org/10.1016/j.hlc.2023.06.725
- Chauhan, A, Newman, B, Roberto, E, Walpola, RL, Seale, H, Chin, M & Harrison, R 2023, "Making it Meaningful': codesigning an intervention to improve medication safety for people from culturally and linguistically diverse backgrounds accessing cancer services', *Patient Experience Journal*, vol. 10, no. 2, pp. 34-48. https://doi.org/10.35680/2372-0247.1732
- 34. Cheek, C, Hayba, N, Richardson, L, Austin, EE, Francis Auton, E, Safi, M, Ransolin, N, Vukasovic, M, De Los Santos, A, Murphy, M, Harrison, R, Churruca, K, Long, JC, Hibbert, PD, Carrigan, A, Newman, B, Hutchinson, K, Mitchell, R, Cutler, H, Holt, L, Braithwaite, J, Gillies, D, Salmon, PM, Walpola, RL, Zurynski, Y, Ellis, LA, Smith, K, Brown, A, Ali, R, Gwynne, K & Clay-Williams, R 2023, 'Experience-based codesign approach

- to improve care in Australian emergency departments for complex consumer cohorts: the MyED project protocol, Stages 1.1-1.3', BMJ Open, vol. 13, no. 7, e072908, pp. 1-8. https://doi.org/10.1136/bmjopen-2023-072908
- 35. Chen, L, Cai, W, Yan, D & Berkovsky, S 2023, 'Eye-tracking-based personality prediction with recommendation interfaces', User Modeling and User-Adapted Interaction, vol. 33, no. 1, pp. 121-157. https://doi.org/10.1007/s11257-022-09336-9
- 36. Cheyne, S, Fraile Navarro, D, Buttery, AK, Chakraborty, S, Crane, O, Hill, K, McFarlane, E, Morgan, RL, Mustafa, RA, Poole, A, Tunnicliffe, D, Vogel, JP, White, H, Whittle, S, Turner, T & ALEC Methods and Processes Working Group and Collaborators 2023, 'Methods for living guidelines: early guidance based on practical experience. Paper 3: selecting and prioritizing questions for living guidelines', Journal of Clinical Epidemiology, vol. 155, pp. 73-83. https://doi. org/10.1016/j.jclinepi.2022.12.021
- 37. Cheyne, S, Fraile Navarro, D, Hill, K, McDonald, S, Tunnicliffe, D, White, H, Whittle, S, Karpusheff, J, Mustafa, R, Morgan, RL, Sultan, S, Turner, T & Australian Living Evidence Consortium Methods and Processes Working Group and Collaborators 2023, 'Methods for living guidelines: early guidance based on practical experience. Paper 1: Introduction', Journal of Clinical Epidemiology, vol. 155, pp. 84-96. https://doi.org/10.1016/j. jclinepi.2022.12.024
- 38. Chilvers, A, Quan, Y, Olsen, KN & Thompson, WF 2023, 'The effects of cultural source sensitivity on music appreciation', Psychology of Music. https://doi. org/10.1177/03057356231201846
- 39. Churruca, K, Ellis, LA, Pope, C, MacLellan, J, Zurynski, Y & Braithwaite, J 2023, 'The place of digital triage in a complex healthcare system: an interview study with key stakeholders in Australia's national provider', Digital Health, vol. 9, pp. 1-11. https://doi.org/10.1177/20552076231181201
- 40. Churruca, K, Falkland, E, Saba, M, Ellis, LA & Braithwaite, J 2023, 'An integrative review of research evaluating organisational culture in residential aged care facilities', BMC Health Services Research, vol. 23, 857, pp. 1-11. https://doi.org/10.1186/s12913-023-09857-y
- 41. Churruca, K, Long, JC, Ellis, LA, Saba, M & Braithwaite, J 2023, 'Cultures of aged care delivery: qualitative content analysis of Australia's Royal Commission into Aged Care Quality and Safety', Australasian Journal on Ageing, vol. 42, no. 2, pp. 417-422. https://doi.org/10.1111/ajag.13175
- 42. Churruca, K, Westbrook, J, Bagot, KL, McMullan, RD, Urwin, R, Cunningham, N, Mitchell, R, Hibbert, P, Sunderland, N, Loh, E & Taylor, N 2023, 'Retrospective analysis of factors influencing the implementation of a program to address unprofessional behaviour and improve culture in Australian hospitals', BMC Health Services Research, vol. 23, no. 1, 584, pp. 1-16. https://doi.org/10.1186/s12913-023-09614-1
- 43. Clay-Williams, R, Hibbert, P, Carrigan, A, Roberts, N, Austin, E, Fajardo Pulido, D, Meulenbroeks, I, Nguyen, HM, Sarkies, M, Hatem, S, Maka, K, Loy, G & Braithwaite, J 2023, 'The diversity of providers' and consumers' views of virtual versus inpatient care provision: a qualitative study', BMC Health Services Research, vol. 23, no. 1, 724, pp. 1-12. https:// doi.org/10.1186/s12913-023-09715-x
- 44. Clay-Williams, R, Zurynski, Y, Long, JC, Meulenbroeks, I, Austin, EE, Mahmoud, Z, Ellis, LA, Knaggs, G, Fajardo Pulido, D, Richardson, L, Ahlenstiel, G, Reece, G & Braithwaite, J 2023, 'What factors are considered in hospital funding models? A review of the literature on health services funding in organisation for economic co-operation and development

- countries', International Journal of Health Planning and Management, vol. 38, no. 5, pp. 1228-1249. https://doi. org/10.1002/hpm.3688
- 45. Coiera, E 2023, 'The standard problem', Journal of the American Medical Informatics Association: JAMIA, vol. 30, no. 12, pp. 2086-2097. https://doi.org/10.1093/ jamia/ocad176
- 46. Cresswell, K, Rigby, M, Magrabi, F, Scott, P, Brender, J, Craven, CK, Wong, ZS-Y, Kukhareva, P, Ammenwerth, E, Georgiou, A, Medlock, S, De Keizer, NF, Nykänen, P, Prgomet, M & Williams, R 2023, 'The need to strengthen the evaluation of the impact of Artificial Intelligence-based decision support systems on healthcare provision', Health Policy, vol. 136, 104889, pp. 1-5. https://doi.org/10.1016/j. healthpol.2023.104889
- 47. Curtis, K, Brown, J, Sharwood, LN, Risi, D, Eager, D, Holland, AJA, Beck, B, Erskine, C, Lockhart, K, Cooke, K, Adams, S, Teague, WJ & Mitchell, R 2023, 'Playground injury prevention: the need for consistent and national implementation of Australian safety standards', Australian and New Zealand Journal of Public Health, vol. 47, no. 2, 100023, pp. 1-8. https://doi.org/10.1016/j.anzjph.2023.100023
- 48. Curtis, K, Dinh, MM, Shetty, A, Kourouche, S, Fry, M, Considine, J, Li, L, Lung, T, Shaw, T, Lam, MK, Murphy, M, Alkhouri, H, Aggar, C, Russell, SB, Seimon, RV, Hughes, JA, Varnell, W & Shaban, RZ 2023, 'The Emergency nurse Protocols Initiating Care—Sydney Triage to Admission Risk Tool (EPIC-START) trial: protocol for a stepped wedge implementation trial', BMC Implementation Science Communications, vol. 4, 70, pp. 1-11. https://doi.org/10.1186/s43058-023-00452-0
- 49. Cutler, H, Gu, Y, Bilgrami, A & Partington, A 2023, 'The 2021 proposal to increase market forces in the Australian residential aged-care sector', Health Policy, vol. 127, pp. 60-65. https:// doi.org/10.1016/j.healthpol.2022.11.005
- 50. Dahm, MR, Bull, R, Sadow, L, Tr n, D, Zurynski, Y, Amin, J, Hadley, F, Harrison, LJ, Waniganayake, M, Wong, S & Degotardi, S 2023, 'Readability and beyond - Health literacy and numeracy and COVID-19 communications in Early Childhood Education: Are we communicating effectively?', Patient Education and Counseling, vol. 114, 107823, pp. 1-9. https://doi.org/10.1016/j. pec.2023.107823
- 51. Dai, Z, Raban, MZ, Sezgin, G, McGuire, P, Datta, S, Wabe, N, Pearce, C, Woodman, R & Georgiou, A 2023, 'Opioid prescribing among aged care residents during the first year of the COVID-19 pandemic: an analysis using general practice health records in Australia', BMC Geriatrics, vol. 23, no. 1, 111, pp. 1-9. https://doi.org/10.1186/s12877-023-03821-5
- 52. Dai, Z, Sezgin, G, Hardie, R-A, McGuire, P, Pearce, C, McLeod, A & Georgiou, A 2023, 'Sociodemographic determinants of telehealth utilisation in general practice during the COVID-19 pandemic in Australia', Internal Medicine Journal, vol. 53, no. 3, pp. 422-425. https://doi.org/10.1111/imj.16006
- 53. Dammery, G, Ellis, LA, Churruca, K, Mahadeva, J, Lopez, F, Carrigan, A, Halim, N, Willcock, S & Braithwaite, J 2023, 'The journey to a learning health system in primary care: a qualitative case study utilising an embedded research approach', BMC Primary Care, vol. 24, no. 1, 22, pp. 1-10. https://doi.org/10.1186/s12875-022-01955-w
- Dammery, G, Vitangcol, K, Ansell, J, Ellis, LA, Smith, CL, Carrigan, A, Braithwaite, J & Zurynski, Y 2023, 'The Patient Activation Measure (PAM) and the pandemic: Predictors of patient activation among Australian health consumers during the COVID-19 pandemic', Health Expectations, vol. 26, no. 3, pp. 1107-1117. https://doi.org/10.1111/hex.13725

- 55. Davidson, JM, Rayner, SL, Liu, S, Cheng, F, Ieva, AD, Chung, RS & Lee, A 2023, 'Inter-regional proteomic profiling of the human brain using an optimized protein extraction method from formalin-fixed tissue to identify signaling pathways', International Journal of Molecular Sciences, vol. 24, no. 5, 4283, pp. 1-18. https://doi.org/10.3390/ijms24054283
- 56. De Groef, A, Evenepoel, M, Van Dijck, S, Dams, L, Haenen, V, Wiles, L, Catley, M, Vogelzang, A, Olver, I, Hibbert, P, Morlion, B, Moseley, GL, Heathcote, LC & Meeus, M 2023, 'Feasibility and pilot testing of a personalized eHealth intervention for pain science education and self-management for breast cancer survivors with persistent pain: a mixed-method study', Supportive Care in Cancer, vol. 31, no. 2, 119, pp. 1-22. https://doi.org/10.1007/s00520-022-07557-7
- 57. De Groef, A, Meeus, M, Heathcote, LC, Wiles, L, Catley, M, Vogelzang, A, Olver, I, Runciman, WB, Hibbert, P, Dams, L, Morlion, B & Moseley, L 2023, 'Treating persistent pain after breast cancer: practice gaps and future directions', *Journal of Cancer Survivorship*, vol. 17, no. 6, pp. 1698-1707. https://doi.org/10.1007/s11764-022-01194-z
- 58. Edney, LC, Roseleur, J, Bright, T, Watson, DI, Arnolda, G, Braithwaite, J, Delaney, GP, Liauw, W, Mitchell, R & Karnon, J 2023, 'DAta Linkage to Enhance Cancer Care (DaLECC): protocol of a large Australian data linkage study', International Journal of Environmental Research and Public Health, vol. 20, no. 11, 5987, pp. 1-16. https://doi.org/10.3390/ijerph20115987
- Ellis, L, Falkland, E, Hibbert, P, Wiig, S, Ree, E, Schultz, TJ, Pirone, C & Braithwaite, J 2023, 'Issues and complexities in safety culture assessment in healthcare', Frontiers in Public Health, vol. 11, 1217542, pp. 1-6. https://doi.org/10.3389/ fpubh.2023.1217542
- 60. Ellis, LA, Saba, M, Long, JC, Bø Lyng, H, Haraldseid-Driftland, C, Churruca, K, Wiig, S, Austin, E, Clay-Williams, R, Carrigan, A & Braithwaite, J 2023, 'The rise of resilient healthcare research during COVID-19: scoping review of empirical research', BMC Health Services Research, vol. 23, no. 1, 833, pp. 1-17. https://doi.org/10.1186/s12913-023-09839-0
- Ellis, LA, Tran, Y, Pomare, C, Long, JC, Churruca, K, Saba, M & Braithwaite, J 2023, 'Hospital organizational change: the importance of teamwork culture, communication, and change readiness', Frontiers in Public Health, vol. 11, 1089252, pp. 1-9. https://doi.org/10.3389/fpubh.2023.1089252
- 62. Ellis, LA, Zurynski, Y, Long, JC, Clay-Williams, R, Ree, E, Sarkies, M, Churruca, K, Shand, FL, Pomare, C, Saba, M, Haraldseid-Driftland, C & Braithwaite, J 2023, 'Systems resilience in the implementation of a large-scale suicide prevention intervention: a qualitative study using a multilevel theoretical approach', BMC Health Services Research, vol. 23, 745, pp. 1-13. https://doi.org/10.1186/s12913-023-09769-x
- 63. Fehlberg, Z, Best, S, Long, JC, Theodorou, T, Pope, C, Hibbert, P, Williams, S, Freeman, L, Righetti, S, Archibald, AD & Braithwaite, J 2023, 'Scaling-up and future sustainability of a national reproductive genetic carrier screening program', npj Genomic Medicine, vol. 8, 18, pp. 1-9. https://doi.org/10.1038/s41525-023-00357-w
- 64. Foo, D, Spanos, S, Dammery, G, Ellis, LA, Willcock, SM & Braithwaite, J 2023, 'The rise of direct-to-consumer telemedicine services in Australia: implications for primary care and future research', *Medical Journal of Australia*, vol. 219, no. 8, pp. 344-347. https://doi.org/10.5694/mja2.52097
- 65. Fraile Navarro, D, Ijaz, K, Rezazadegan, D, Rahimi-Ardabili, H, Dras, M, Coiera, E & Berkovsky, S 2023, 'Clinical named entity recognition and relation extraction using natural language

- processing of medical free text: a systematic review', International Journal of Medical Informatics, vol. 177, 105122, pp. 1-21. https://doi.org/10.1016/j.ijmedinf.2023.105122
- 66. Fraile Navarro, D, Kocaballi, AB, Dras, M & Berkovsky, S 2023, 'Collaboration, not confrontation: understanding General Practitioners' attitudes towards natural language and text automation in clinical practice', ACM Transactions on Computer-Human Interaction, vol. 30, no. 2, 29, pp. 1-34. https://doi.org/10.1145/3569893
- 67. Francis-Auton, E, Long, JC, Sarkies, M, Roberts, N, Westbrook, J, Levesque, JF, Watson, DE, Hardwick, R, Hibbert, P, Pomare, C & Braithwaite, J 2023, 'Four system enablers of large-system transformation in health care: a mixed methods realist evaluation', *Milbank Quarterly*. https://doi.org/10.1111/1468-0009.12684
- 68. Georgiou, A, Li, J, Thomas, J, Horvath, R, Lindeman, R & Westbrook, J 2023, 'The delivery of safe and effective communication, management and follow-up of test results', *Public Health Research and Practice*, vol. 33, no. 3, e3332324, pp. 1-5. https://doi.org/10.17061/phrp3332324
- 69. Goirand, M, Austin, E & Clay-Williams, R 2023, 'Mapping the flow of knowledge as guidance for ethics implementation in medical AI: a qualitative study', PLoS ONE, vol. 18, no. 11, e0288448, pp. 1-20. https://doi.org/10.1371/journal.pone.0288448
- Gorrell, LM, Brown, BT, Engel, R & Lystad, RP 2023, 'Reporting of adverse events associated with spinal manipulation in randomised clinical trials: an updated systematic review', BMJ Open, vol. 13, no. 5, e067526, pp. 1-10. https://doi.org/10.1136/bmjopen-2022-067526
- Grima, N, Liu, S, Southwood, D, Henden, L, Smith, A, Lee, A, Rowe, DB, D'Silva, S, Blair, IP & Williams, KL 2023, 'RNA sequencing of peripheral blood in amyotrophic lateral sclerosis reveals distinct molecular subtypes: considerations for biomarker discovery', Neuropathology and Applied Neurobiology, vol. 49, no. 6, e12943, pp. 1-16. https://doi. org/10.1111/nan.12943
- 72. Gumbie, M, Costa, M, Erb, M & Dissanayake, G 2023, 'Innovative technologies for reverse total shoulder arthroplasty in Australia: Market access challenges and implications for patients, decision-makers, and manufacturers', *Journal of Market Access & Health Policy*, vol. 11, no. 1, 2154420, pp. 1-10. https://doi.org/10.1080/20016689.2022.2154420
- Gurney, H, Clay, TD, Oliveira, N, Wong, S, Tran, B & Harris, C 2023, 'Systemic treatment of advanced and metastatic urothelial cancer: the landscape in Australia', Asia-Pacific Journal of Clinical Oncology, vol. 19, no. 6, pp. 585-595. https://doi.org/10.1111/ajco.14001
- 74. Gyawali, R, Ho, KC, Toomey, M, Stapleton, F, Keay, L, Hibbert, P, Wiles, L & Jalbert, I 2023, 'Level of appropriate primary diabetic eyecare delivered and achievable in optometry practices in Australia', *Clinical and Experimental Optometry*, vol. 106, no. 3, pp. 276-282. https://doi.org/10.1080/081646 22.2022.2033107
- 75. Gyawali, R, Toomey, M, Stapleton, F, Ho, KC, Keay, L, Pye, DC, Katalinic, P, Liew, G, Hsing, YI, Ramke, J, Gentle, A, Webber, AL, Schmid, KL, Bentley, S, Hibbert, P, Wiles, L & Jalbert, I 2023, 'Clinical indicators for diabetic eyecare delivered by optometrists in Australia: a Delphi study', Clinical and Experimental Optometry. https://doi.org/10.1080/08164622.2023.2253792
- 76. Halim, N, Holland, AJA, McMaugh, A, Cameron, CM, Lystad, RP, Badgery-Parker, T & Mitchell, R 2023, 'Impact of childhood burns on academic performance: a matched

- population-based cohort study', Archives of Disease in Childhood, vol. 108, no. 10, pp. 808-814. https://doi. org/10.1136/archdischild-2023-325769
- 77. Halim, NK, Comi, R & Mitchell, RJ 2023, 'An integrative review of facilitators and barriers to resilience among informal unpaid caregivers', International Journal of Care and Caring. https://doi.org/10.1332/239788221X16825359407198
- 78. Halim, NK, Harris, RG, Cameron, ID, Close, J, Harris, IA, Hallen, J, Hurring, S, Ward, N, McDougall, C & Mitchell, RJ 2023, 'Two-country comparison of the prescription of bone protection medication before and early after hip fracture', Archives of Osteoporosis, vol. 18, no. 1, 8, pp. 1-12. https:// doi.org/10.1007/s11657-022-01197-4
- 79. Halloush, S, Alkhatib, NS, Almutairi, AR, Calamia, M, Halawah, H, Obeng-Kusi, M, Hoyle, M, Rashdan, O, Koeller, J & Abraham, I 2023, 'Economic evaluation of three BRAF + MEK inhibitors for the treatment of advanced unresectable melanoma with BRAF mutation from a US payer perspective', Annals of Pharmacotherapy, vol. 57, no. 9, pp. 1016-1024. https://doi.org/10.1177/10600280221146878
- 80. Haraldseid-Driftland, C, Bø Lyng, H, Guise, V, Waehle, HV, Schibevaag, L, Ree, E, Fagerdal, B, Baxter, R, Ellis, L, Braithwaite, J & Wiig, S 2023, 'Learning does not just happen: establishing learning principles for tools to translate resilience into practice, based on a participatory approach', BMC Health Services Research, vol. 23, 646, pp. 1-10. https://doi.org/10.1186/s12913-023-09653-8
- Harrison, R, Newman, B, Chauhan, A & Sarwar, M 2024, 'Employing co-facilitation to balance power and priorities during health service co-design', Health Expectations, vol. 27, no. 1, e13875, pp. 1-4. https://doi.org/10.1111/hex.13875
- 82. Hayba, N, Cheek, C, Austin, E, Testa, L, Richardson, L, Safi, M, Ransolin, N, Carrigan, A, Harrison, R, Francis-Auton, E & Clay-Williams, R 2023, 'Strategies to improve care in the emergency department for culturally and linguistically diverse adults: a systematic review', Journal of Racial and Ethnic Health Disparities. https://doi.org/10.1007/s40615-023-01876-z
- 83. Hekmat-Ardakani, A, Morshed-Behbahani, B, Rahimi-Ardabili, H, Ayati, MH & Namazi, N 2023, 'The effects of dietary supplements and natural products targeting glucose levels: an overview', Critical Reviews in Food Science and Nutrition, vol. 63, no. 23, pp. 6138-6167. https://doi.org/10.10 80/10408398.2022.2028716
- 84. Héroux, M, Diong, J, Bye, E, Fisher, G, Robertson, L, Butler, A & Gandevia, S 2023, 'Poor statistical reporting, inadequate data presentation and spin persist despite Journal awareness and updated Information for Authors', F1000Research, vol. 12, 1483, pp. 1-11. https://doi. org/10.12688/f1000research.142841.1
- 85. Hibbert, PD, Ash, R, Molloy, CJ, Westbrook, J, Cameron, ID, Carson-Stevens, A, Gray, LC, Reed, RL, Kitson, A & Braithwaite, J 2023, 'Unsafe care in residential settings for older adults: a content analysis of accreditation reports', International Journal for Quality in Health Care, vol. 35, no. 4, mzado85, pp. 1-8. https://doi.org/10.1093/intqhc/mzado85
- 86. Hibbert, PD, Molloy, CJ, Schultz, TJ, Carson-Stevens, A & Braithwaite, J 2023, 'Comparing rates of adverse events detected in incident reporting and the Global Trigger Tool: a systematic review', International Journal for Quality in Health Care, vol. 35, no. 3, mzado56, pp. 1-8. https://doi. org/10.1093/intqhc/mzado56
- 87. Hibbert, PD, Stewart, S, Wiles, LK, Braithwaite, J, Runciman, WB & Thomas, MJW 2023, 'Improving patient safety

- governance and systems through learning from successes and failures: qualitative surveys and interviews with international experts', International Journal for Quality in Health Care, vol. 35, no. 4, mzado88, pp. 1-11. https://doi. org/10.1093/intqhc/mzado88
- Huang, G, Guo, F & Chen, G 2023, 'Utilisation of home-/ community-based care services: current experience and future intention in urban China', Population Research and Policy Review, vol. 42, no. 4, 61, pp. 1-34. https://doi. org/10.1007/s11113-023-09810-1
- 89. Huang, G, Guo, F, Cheng, Z, Liu, L, Zimmermann, KF, Taksa, L, Tani, M & Franklin, M 2023, 'Nativity in the healthy migrant effect: Evidence from Australia', SSM - Population Health, vol. 23, 101457, pp. 1-14. https://doi.org/10.1016/j. ssmph.2023.101457
- 90. Huang, G, Guo, F, Cheng, Z, Tani, M & Chen, G 2023, 'Projections of future demand and costs of aged care services in China', Population Research and Policy Review, vol. 42, no. 4, 56, pp. 1-30. https://doi.org/10.1007/s11113-023-09803-0
- Huang, G, Guo, F, Liu, L, Taksa, L, Cheng, Z, Tani, M, Zimmermann, KF, Franklin, M & Silva, SSM 2024, 'Changing impact of COVID-19 on life expectancy 2019-2023 and its decomposition: findings from 27 countries', SSM - Population Health, vol. 25, 101568, pp. 1-10. https://doi.org/10.1016/j. ssmph.2023.101568
- 92. Huang, G, Guo, F, Taksa, L, Cheng, Z, Tani, M, Liu, L, Zimmermann, KF & Franklin, M 2024, 'Decomposing the differences in healthy life expectancy between migrants and natives: the 'healthy migrant effect' and its age variations in Australia', Journal of Population Research, vol. 41, no. 1, 3, pp. 1-28. https://doi.org/10.1007/s12546-023-09325-8
- Huang, G, Guo, F, Zimmermann, KF, Liu, L, Taksa, L, Cheng, Z, Tani, M & Franklin, M 2023, 'The effect of the COVID-19 pandemic on life expectancy in 27 countries', Scientific Reports, vol. 13, 8911, pp. 1-11. https://doi.org/10.1038/ s41598-023-35592-9
- 94. Huang, G, Wabe, N, Raban, MZ, Seaman, KL, Silva, SM & Westbrook, JI 2023, 'The relationship between fall incidents and place of birth in residential aged care facilities: a retrospective longitudinal cohort study', BMC Geriatrics, vol. 23, no. 1, 257, pp. 1-11. https://doi.org/10.1186/s12877-023-03954-7
- Huckvale, K, Hoon, L, Stech, E, Newby, JM, Zheng, WY, Han, J, Vasa, R, Gupta, S, Barnett, S, Senadeera, M, Cameron, S, Kurniawan, S, Agarwal, A, Kupper, JF, Asbury, J, Willie, D, Grant, A, Cutler, H, Parkinson, B, Ahumada-Canale, A, Beames, J, Logothetis, R, Bautista, M, Rosenberg, J, Shvetcov, A, Quinn, T, Mackinnon, A, Rana, S, Tran, T, Rosenbaum, S, Mouzakis, K, Werner-Seidler, A, Whitton, A, Venkatesh, S & Christensen, HM 2023, 'Protocol for a bandit-based response adaptive trial to evaluate the effectiveness of brief self-guided digital interventions for reducing psychological distress in university students: the Vibe Up study', BMJ Open, vol. 13, no. 4, e066249, pp. 1-17. https://doi.org/10.1136/bmjopen-2022-066249
- Hutchinson, K, Ryder, T, Coleman, H, Nullwala, R, Herkes, G, Bleasel, A, Nikpour, A, Wong, C, Todd, L, Ireland, C, Shears, G, Bartley, M, Groot, W, Kerr, M, Vagholkar, S, Braithwaite, J & Rapport, F 2023, 'Determining the role and responsibilities of the community epilepsy nurse in the management of epilepsy', Journal of Clinical Nursing, vol. 32, no. 13-14, pp. 3730-3745. https://doi.org/10.1111/ jocn.16582

- 97. Imai, CC, Li, L, Hardie, R-A, Pearce, C & Georgiou, A 2023, 'Patient and practice factors associated with HbA1c testing frequency in patients with type 2 diabetes: a retrospective cohort study in Australian general practice', Australian Journal of Primary Health, vol. 29, no. 5, pp. 520-526. https://doi.org/10.1071/PY22026
- 98. Inacio, MC, Eshetie, TC, Caughey, GE, Whitehead, C, Westbrook, J, Gray, L, Hibbert, P, Beattie, E, Braithwaite, J, Cameron, ID, Crotty, M & Wesselingh, S 2023, 'Quality and safety in residential aged care: an evaluation of a national quality indicator programme', Internal Medicine Journal, vol. 53, no. 11, pp. 2073-2078. https://doi.org/10.1111/imj.16052
- 99. Iqbal, MP, Newman, B, Ellis, LA, Mears, S & Harrison, R 2023, 'Characterising consumer engagement in virtual models of care: a systematic review and narrative synthesis', *Patient Education and Counseling*, vol. 115, 107922, pp. 1-35. https://doi.org/10.1016/j.pec.2023.107922
- 100. Jahandideh, S, Ozavci, G, Sahle, BW, Kouzani, AZ, Magrabi, F & Bucknall, T 2023, 'Evaluation of machine learning-based models for prediction of clinical deterioration: a systematic literature review', *International Journal of Medical Informatics*, vol. 175, 105084, pp. 1-14. https://doi.org/10.1016/j. ijmedinf.2023.105084
- 101. Jared, L, David, K, Ramarao, J, Ward, K, Raghuraman, S, Waheed, M & Lau, AYS 2023, 'Translating primary care to telehealth: analysis of in-person consultations on diabetes and cardiovascular disease', BJGP Open, vol. 7, no. 1, 0123, pp. 1-10. https://doi.org/10.3399/BJGP0.2022.0123
- 102. Jeet, V, Parkinson, B, Song, R, Sharma, R & Hoyle, M 2023, 'Histopathologically validated diagnostic accuracy of PSMA-PET/CT in the primary and secondary staging of prostate cancer and the impact of PSMA-PET/CT on clinical management: a systematic review and meta-analysis', *Seminars in Nuclear Medicine*, vol. 53, no. 5, pp. 706-718. https://doi.org/10.1053/j.semnuclmed.2023.02.006
- 103. Jiang, J, Jiang, S, Ahumada-Canale, A, Chen, Z, Si, L, Jiang, Y, Yang, L & Gu, Y 2023, 'Breast cancer screening should embrace precision medicine: Evidence by reviewing economic evaluations in China', Advances in Therapy, vol. 40, no. 4, pp. 1393–1417. https://doi.org/10.1007/s12325-023-02450-z
- 104. Jiang, S, Ren, R, Gu, Y, Jeet, V, Liu, P & Li, S 2023, 'Patient preferences in targeted pharmacotherapy for cancers: A systematic review of discrete choice experiments', *PharmacoEconomics*, vol. 41, no. 1, pp. 43-57. https://doi. org/10.1007/s40273-022-01198-8
- 105. Jiang, Y, Li, M, Jiang, S, Si, L & Gu, Y 2023, 'Patient welfare implications of indication-specific value-based pricing of multi-indication drugs', Value in Health. https://doi. org/10.1016/j.jval.2023.11.008
- 106. Johnson, J, Pointon, L, Talbot, R, Coleman, R, Budworth, L, Simms-Ellis, R, Vogt, K, Tsimpida, D, Biyani, CS, Harrison, R, Cheung, G, Melville, C, Jayagopal, V & Lea, W 2023, 'Reboot coaching programme: a mixed-methods evaluation assessing resilience, confidence, burnout and depression in medical students', Scottish Medical Journal. https://doi.org/10.1177/00369330231213981
- 107. Jorgensen, M, Nankervis, K & Chan, J 2023, "Environments of concern': reframing challenging behaviour within a human rights approach', *International Journal of Developmental Disabilities*, vol. 69, no. 1, pp. 95-100. https://doi.org/10.1080/20473869.2022.2118513

- 108. Jose, L, Liu, S, Russo, C, Cong, C, Song, Y, Rodriguez, M & Di leva, A 2023, 'Artificial intelligence-assisted classification of gliomas using whole-slide images', *Archives of Pathology and Laboratory Medicine*, vol. 147, no. 8, pp. 916-924. https://doi.org/10.5858/arpa.2021-0518-OA
- 109. Lamprell, K, Fajardo-Pulido, D, Arnolda, G, Owais, SS, Nic Giolla Easpaig, B, Tran, Y, Liauw, W & Braithwaite, J 2023, 'Things I need you to know: a qualitative analysis of advice-giving statements in early-onset colorectal cancer patients' personal accounts published online', BMJ Open, vol. 13, no. 3, e068073, pp. 1-9. https://doi.org/10.1136/bmjopen-2022-068073
- 110. Lamprell, K, Pulido, DF, Arnolda, G, Nic Giolla Easpaig, B, Tran, Y, Owais, SS, Liauw, W & Braithwaite, J 2023, 'People with early-onset colorectal cancer describe primary care barriers to timely diagnosis: a mixed-methods study of web-based patient reports in the United Kingdom, Australia and New Zealand', BMC Primary Care, vol. 24, no. 1, 12, pp. 1-12. https://doi.org/10.1186/s12875-023-01967-0
- 111. Ledger, TS, Brooke-Cowden, K & Coiera, E 2023, 'Post-implementation optimization of medication alerts in hospital computerized provider order entry systems: a scoping review', Journal of the American Medical Informatics Association: JAMIA, vol. 30, no. 12, pp. 2064-2071. https://doi.org/10.1093/jamia/ocad193
- 112. Li, L, Baker, J, Rathnayake, K, Kotwal, S, Westbrook, JI, Day, R & Endre, Z 2023, 'Medication use and hospital-acquired acute kidney injury: an electronic health record-based study', *Internal Medicine Journal*, vol. 53, no. 9, pp. 1625-1633. https://doi.org/10.1111/imj.15938
- 113. Li, MG, Olsen, KN, Davidson, JW & Thompson, WF 2023, 'Rich intercultural music engagement enhances cultural understanding: the impact of learning a musical instrument outside of one's lived experience', *International Journal of Environmental Research and Public Health*, vol. 20, no. 3, 1919, pp. 1-16. https://doi.org/10.3390/ijerph20031919
- 114. Lichtner, V, Prgomet, M, Gates, P & Franklin, BD 2023, 'Automatic dispensing cabinets and governance of controlled drugs: an exploratory study in an intensive care unit', European Journal of Hospital Pharmacy, vol. 30, no. 1, pp. 17-23. https://doi.org/10.1136/ejhpharm-2020-002552
- 115. Lingam, R, Smithers-Sheedy, H, Hodgson, S, Hutchinson, K, Meyers Morris, T, Hu, N, Nassar, N, Schroeder, E-A, Rana, R, Dickins, E, Bula, K & Zurynski, Y 2023, 'Evaluation of RuralKidsGPS; a novel integrated paediatric care coordination model of care in rural Australia: a mixed-methods study protocol', International Journal of Integrated Care, vol. 23, no. 4, 10, pp. 1-11. https://doi.org/10.5334/ijic.7008
- 116. Liu, S, Li, Z, Cai, S & Wang, F 2023, '家庭体育环境与青少年身体姿态异常的关系研究: 基于自主体育锻炼的中介效应', Journal of Capital University of Physical Education and Sports, vol. 31, no. 1, pp. 1-9. https://doi.org/10.14036/j.cnki.cn11-4513.2023.01.001
- 117. Liu, Z, Ou, W, Zhang, K & Xiong, H 2024, 'Robust manifold discriminative distribution adaptation for transfer subspace learning', *Expert Systems with Applications*, vol. 238, 122117, pp. 1-16. https://doi.org/10.1016/j.eswa.2023.122117
- 118. Livshiz-Riven, I, Hurvitz, N, Grinberg, K, Halperin, O, Spitz, A, Itzhaki, M, Cohen, OG, Blau, A, Ziv-Baran, T, Westbrook, J, Urwin, R, Li, L, Barnoy, S & Reicher, S 2023, 'Nursing students' experiences of unprofessional behaviours and associations with guideline compliance: a multicenter survey', Nurse Education in Practice, vol. 71, 103739, pp. 1-7. https://doi.org/10.1016/j.nepr.2023.103739

- 119. Long, JC, Sarkies, MN, Francis-Auton, E, Roberts, N, Hardwick, R, Nguyen, K, Levesque, J-F, Watson, DE, Westbrook, J, Hibbert, P, Rapport, F & Braithwaite, J 2023, 'Guiding principles for effective collaborative implementation strategies for multisite hospital improvement initiatives: a mixed-method realist evaluation of collaborative strategies used in four multisite initiatives at public hospitals in New South Wales, Australia', BMJ Open, vol. 13, no. 6, e070799, pp. 1-11. https://doi.org/10.1136/bmjopen-2022-070799
- 120. Ludlow, T, Fooken, J, Rose, C & Tang, KK 2024, 'Out-of-pocket expenditure, need, utilisation, and private health insurance in the Australian healthcare system', International Journal of Health Economics and Management, vol. 24, pp. 33-56. https://doi.org/10.1007/s10754-023-09362-z
- 121. Lyell, D & Magrabi, F 2023, 'Artificial intelligence in medicine: has the time come to hang up the stethoscope?', Internal Medicine Journal, vol. 53, no. 9, pp. 1533-1539. https://doi. org/10.1111/imj.16216
- 122. Lyell, D, Wang, Y, Coiera, E & Magrabi, F 2023, 'More than algorithms: an analysis of safety events involving ML-enabled medical devices reported to the FDA', Journal of the American Medical Informatics Association, vol. 30, no. 7, pp. 1227-1236. https://doi.org/10.1093/jamia/ocado65
- 123. Lystad, RP 2023, 'Changes in sport-related concussion and traumatic brain injury in New Zealand during the first two years of the COVID-19 pandemic', Journal of Science and Medicine in Sport, vol. 26, no. 4-5, pp. 241-246. https://doi. org/10.1016/j.jsams.2023.03.006
- 124. Lystad, RP, Fyffe, A, Orr, R & Browne, G 2023, 'Changes in paediatric injury-related emergency department presentations during the COVID-19 pandemic', Trauma Care, vol. 3, no. 2, pp. 46-54. https://doi.org/10.3390/traumacare3020006
- 125. Lystad, RP, McMaugh, A, Herkes, GK, Browne, G, Badgery-Parker, T, Cameron, CM & Mitchell, RJ 2023, 'Risk of impaired school performance in children hospitalized with concussion: a population-based matched cohort study', Concussion, vol. 8, no. 3, CNC105. https://doi.org/10.2217/cnc-2022-0012
- 126. Maben, J, Aunger, JA, Abrams, R, Wright, JM, Pearson, M, Westbrook, JI, Jones, A & Mannion, R 2023, 'Interventions to address unprofessional behaviours between staff in acute care: what works for whom and why? A realist review', BMC Medicine, vol. 21, no. 1, 403, pp. 1-27. https://doi.org/10.1186/ \$12916-023-03102-3
- 127. Magrabi, F, Lyell, D & Coiera, E 2023, 'Automation in contemporary clinical information systems: a survey of AI in healthcare settings', Yearbook of Medical Informatics, vol. 32, no. 1, pp. 115-126. https://doi.org/10.1055/s-0043-1768733
- 128. Mao, J-J, Chen, H-L, Li, C-H, Lu, J-W, Gu, Y-Y, Feng, J, Zhang, B, Ma, J-F & Qin, G 2023, 'Population impact of fine particulate matter on tuberculosis risk in China: a causal inference', BMC Public Health, vol. 23, no. 1, 2285, pp. 1-10. https://doi.org/10.1186/s12889-023-16934-8
- 129. Martínez-Mardones, F, Benrimoj, SI, Ahumada-Canale, A, Plaza-Plaza, JC & Garcia-Cardenas, V 2023, 'BC Clinical impact of medication reviews with follow-up in cardiovascular older patients in primary care: A cluster-randomized controlled trial', British Journal of Clinical Pharmacology, vol. 89, no. 7, pp. 2131-2143. https://doi.org/10.1111/bcp.15682
- 130. McMullan, RD, Urwin, R, Sunderland, N, Churruca, K, Cunningham, N & Westbrook, J 2023, 'Experiences of peer messengers as part of a professional accountability culture change program to reduce unprofessional behaviour:

- a cross-sectional study across eight hospitals', Australian Health Review, vol. 47, no. 3, pp. 346-353. https://doi. org/10.1071/AH22191
- 131. McMullan, RD, Urwin, R, Wiggins, M & Westbrook, JI 2023, 'Are two-person checks more effective than one-person checks for safety critical tasks in high-consequence industries outside of healthcare? A systematic review', Applied Ergonomics, vol. 106, 103906, pp. 1-7. https://doi. org/10.1016/j.apergo.2022.103906
- 132. Meulenbroeks, I, Raban, MZ, Seaman, K, Wabe, N & Westbrook, J 2023, 'Allied health service delivery in residential aged care and the impact of the coronavirus (COVID-19) pandemic: a survey of the allied health workforce', Australian Health Review, vol. 47, no. 6, pp. 729-734. https://doi. org/10.1071/AH23093
- 133. Meulenbroeks, I, Seaman, K, Raban, MZ & Westbrook, J 2023, 'Allied health in residential aged care: using routinely collected data to improve funding opportunities', Australasian Journal on Ageing, vol. 42, no. 1, pp. 221-224. https://doi.org/10.1111/ajag.13136
- 134. Meulenbroeks, I, Seaman, K, Raban, MZ, Wabe, N & Westbrook, J 2023, 'Just visiting: a qualitative study of Australian allied health professionals' experiences working in residential aged care facilities during the COVID-19 pandemic', Australasian Journal on Ageing, vol. 42, no. 4, pp. 690-697. https://doi.org/10.1111/ajag.13217
- 135. Mitchell, RJ, Burns, N, Glozier, N & Nielssen, O 2023, 'Homelessness and predictors of criminal reoffending: a retrospective cohort study', Criminal Behaviour and Mental Health, vol. 33, no. 4, pp. 261-275. https://doi.org/10.1002/ cbm,2298
- 136. Mitchell, RJ, Wijekulasuriya, S, du Preez, J, Lystad, R, Chauhan, A, Harrison, R, Curtis, K & Braithwaite, J 2024, 'Population-level quality indicators of end-of-life-care in an aged care setting: rapid systematic review', Archives of Gerontology and Geriatrics, vol. 116, 105130, pp. 1-16. https:// doi.org/10.1016/j.archger.2023.105130
- 137. Mitsutake, S, Sa, Z, Long, J, Braithwaite, J, Levesque, J-F, Watson, DE, Close, J & Mitchell, R 2024, 'The role of frailty risk for fracture-related hospital readmission and mortality after a hip fracture', Archives of Gerontology and Geriatrics, vol. 117, 105264, pp. 1-8. https://doi.org/10.1016/j. archger.2023.105264
- 138. Newman, B, Chin, M, Robinson, L, Chauhan, A, Manias, E, Wilson, C & Harrison, R 2023, 'Improving medication safety in cancer services for ethnic minority consumers: protocol for a pilot feasibility and acceptability study of a co-designed consumer engagement intervention', JMIR Research Protocols, vol. 12, e49902, pp. 1-8. https://doi. org/10.2196/49902
- 139. Newman, B, Fisher, KR & Trollor, J 2023, 'How do Australian mental health services use easy read to make information accessible for people with intellectual disability?', Journal of Applied Research in Intellectual Disabilities, vol. 36, no. 6, pp. 1354-1362. https://doi.org/10.1111/jar.13156
- 140. Nguyen, P-Y, Astell-Burt, T, Rahimi-Ardabili, H & Feng, X 2023, 'Effect of nature prescriptions on cardiometabolic and mental health, and physical activity: a systematic review', The Lancet Planetary Health, vol. 7, no. 4, pp. e313-e328. https://doi.org/10.1016/S2542-5196(23)00025-6
- 141. Norman, A, Lowe, R, Onslow, M, O'Brian, S, Packman, A, Menzies, R & Schroeder, L 2023, 'Cost of illness and healthrelated quality of life for stuttering: two systematic reviews',

- Journal of Speech, Language, and Hearing Research, vol. 66, no. 11, pp. 4414-4431. https://doi.org/10.1044/2023_ JSLHR-23-00072
- 142. O'Donnell, D, Ahern, E, Davies, C, De Brún, A, Donnelly, S, Doran, T, Drury, A, Dunne, N, Finucane, L, Harnett, PJ, Harrison, R, Lang, D, McAuliffe, E, McCarthy, M, McGuigan, C, Ní Shé, É, O'Donoghue, G, O'Shea, M, Radomska, A, Travers, J, Whitty, H & Devaney, C 2023, 'A realist process evaluation of an intervention to promote competencies in interprofessional collaboration among interdisciplinary integrated care teams for older people: study protocol', HRB Open Research, vol. 6, 49, pp. 1-18. https://doi.org/10.12688/hrbopenres.13729.1
- 143. Ong, N, Gee, BL, Long, JC, Zieba, J, Tomsic, G, Garg, P, Lapointe, C, Silove, N & Eapen, V 2023, 'Patient safety and quality care for children with intellectual disability: an action research study', *Journal of Intellectual Disabilities*, vol. 27, no. 4, pp. 885-911. https://doi.org/10.1177/17446295221104619
- 144. Ong, N, Lucien, A, Long, J, Weise, J, Burgess, A & Walton, M 2024, 'What do parents think about the quality and safety of care provided by hospitals to children and young people with an intellectual disability? A qualitative study using thematic analysis', *Health Expectations*, vol. 27, no. 1, e13925, pp. 1-16. https://doi.org/10.1111/hex.13925
- 145. Ong, N, Lucien, A, Long, JC, Weise, J, Walton, M & Burgess, A 2023, 'What do healthcare staff think about the quality and safety of care provided to children and young people with an intellectual disability? A qualitative study using the framework method of analysis', BMJ Open, vol. 13, no. 7, e071494, pp. 1-9. https://doi.org/10.1136/bmjopen-2022-071494
- 146. Osman Andersen, T, Nunes, F, Wilcox, L, Coiera, E & Rogers, Y 2023, 'Introduction to the Special Issue on Human-Centred AI in Healthcare: challenges appearing in the wild', *ACM Transactions on Computer-Human Interaction*, vol. 30, no. 2, 25, pp. 1-11. https://doi.org/10.1145/3589961
- 147. Osman, S, Churruca, K, Ellis, L & Braithwaite, J 2023, 'Beyond the planned and expected: the unintended consequences of telehealth in rural and remote Australia through a complexity lens', Medical Journal of Australia.
- 148. Osman, S, Churruca, K, Ellis, LA & Braithwaite, J 2023, 'Systems archetypes to investigate the unintended consequences of telehealth in rural Australia: a systems thinking approach to telehealth evaluation and policymaking', The International Journal of Health Planning and Management. https://doi.org/10.1002/ hpm.3741
- 149. Owais, SS, Arnolda, G, Lamprell, K, Liauw, W, Delaney, GP, Olver, I, Karnon, J & Braithwaite, J 2023, 'Age-related experiences of colorectal cancer diagnosis: a secondary analysis of the English National Cancer Patient Experience Survey', BMJ Open Gastroenterology, vol. 10, no. 1, e001066, pp. 1-12. https://doi.org/10.1136/bmjgast-2022-001066
- 150. Pagano, L, Hemmert, C, Hirschhorn, A, Francis-Auton, E, Arnolda, G, Long, JC, Braithwaite, J, Gumley, G, Hibbert, PD, Churruca, K, Hutchinson, K, Partington, A, Hughes, C, Gillatt, D, Ellis, LA, Testa, L, Patel, R & Sarkies, MN 2023, 'Implementation of consensus-based perioperative care pathways to reduce clinical variation for elective surgery in an Australian private hospital: a mixed-methods pre-post study protocol', BMJ Open, vol. 13, no. 7, e075008, pp. 1-8. https://doi.org/10.1136/bmjopen-2023-075008
- 151. Palmer, E, Millis, N, Farrar, MA, Zurynski, Y, Baynam, G & Jaffe, A 2023, 'Rare diseases: new approaches to diagnosis and care', Medicine Today, vol. 24, no. 1-2, pp. 69-75.

- 152. Park, KH, Tickle, L & Cutler, H 2024, 'How temporal patterns of medication adherence to antidepressants, bisphosphonates and statins are associated with healthcare cost', *Applied Economics*, vol. 56, no. 11, pp. 1283-1308. https://doi.org/10.1080/00036846.2023.2176446
- 153. Pavithra, A, Mannion, R, Li, L & Westbrook, J 2023, 'The impact of vulnerability and exposure to pervasive interprofessional incivility among medical staff on wellbeing', Frontiers in Public Health, vol. 11-2023, 1168978, pp. 1-8. https://doi.org/10.3389/fpubh.2023.1168978
- 154. Piggott, T, Langendam, MW, Parmelli, E, Adolfsson, J, Akl, EA, Armstrong, D, Braithwaite, J, Brignardello-Petersen, R, Brozek, J, Follmann, M, Kopp, I, Meerpohl, JJ, Neamtiu, L, Nothacker, M, Qaseem, A, Rossi, PG, Saz-Parkinson, Z, van der Wees, PJ & Schünemann, HJ 2023, 'The GIN-McMaster guideline tool extension for the integration of quality improvement and quality assurance in guidelines: a description of the methods for its development', *Journal of Clinical Epidemiology*, vol. 154, pp. 197-203. https://doi.org/10.1016/j.jclinepi.2022.04.002
- 155. Powell, M, Olsen, KN & Thompson, WF 2023, 'Music, pleasure, and meaning: the Hedonic and Eudaimonic Motivations for Music (HEMM) scale', International Journal of Environmental Research and Public Health, vol. 20, no. 6, 5157, pp. 1-19. https://doi.org/10.3390/ijerph20065157
- 156. Powell, M, Olsen, KN, Vallerand, RJ & Thompson, WF 2023, 'Passion, music, and psychological well-being', *Musicae Scientiae*. https://doi.org/10.1177/10298649231157404
- 157. Pozzato, I, Arora, M, McBain, C, Wijesuriya, N, Tran, Y, Middleton, JW & Craig, AR 2023, 'Cognitive failure in adults with spinal cord injury: a valuable adjunct measure for enhancing cognitive assessment and rehabilitation outcomes', Neurology International, vol. 15, no. 4, pp. 1371-1382. https://doi.org/10.3390/neurolint15040087
- 158. Purchase, T, Cooper, A, Price, D, Dorgeat, E, Williams, H, Bowie, P, Fournier, J-P, Hibbert, P, Edwards, A, Phillips, R, Joseph-Williams, N & Carson-Stevens, A 2023, 'Analysis of applying a patient safety taxonomy to patient and clinician-reported incident reports during the COVID-19 pandemic: a mixed methods study', BMC Medical Research Methodology, vol. 23, 234, pp. 1-12. https://doi.org/10.1186/s12874-023-02057-6
- 159. Raban, MZ, Gates, PJ, Gamboa, S, Gonzalez, G & Westbrook, JI 2023, 'Effectiveness of non-interruptive nudge interventions in electronic health records to improve the delivery of care in hospitals: a systematic review', Journal of the American Medical Informatics Association: JAMIA, vol. 30, no. 7, pp. 1313-1322. https://doi.org/10.1093/jamia/ocad083
- 160. Raban, MZ, Gonzalez, G, Nguyen, AD, Newell, BR, Li, L, Seaman, KL & Westbrook, JI 2023, 'Nudge interventions to reduce unnecessary antibiotic prescribing in primary care: a systematic review', BMJ Open, vol. 13, no. 1, e062688, pp. 1-11. https://doi.org/10.1136/bmjopen-2022-062688
- 161. Raghuraman, S, Ramarao, J, Lane, J, Ward, K & Lau, AYS 2023, 'Analysis of in-person general practice respiratory consultations: assessing translatability to telehealth', BJGP Open, vol. 7, no. 4, 0073, pp. 1-10. https://doi.org/10.3399/BJGPO.2023.0073
- 162. Ransolin, N, Saurin, TA, Clay-Williams, R, Formoso, CT & Rapport, F 2024, 'A knowledge framework for the design of built environment supportive of resilient internal logistics in hospitals', *Applied Ergonomics*, vol. 116, 104209, pp. 1-14. https://doi.org/10.1016/j.apergo.2023.104209

- 163. Ransolin, N, Wachs, P & Bueno, WP 2023, 'A functional perspective for Intensive Care Unit modelling', *Producao*, vol. 33, e20220081, pp. 1-13. https://doi.org/10.1590/0103-6513.20220081
- 164. Rao, B, Januszewski, AS, Brazionis, L, O'Connell, R, Aryal, N, Shimmin, G, O'Day, J, Mitchell, P, Colman, PG, Keech, AC, Jenkins, AJ & FIELD trial investigators 2023, 'No relationship between socioeconomic status, education level and development and progression of diabetic retinopathy in type 2 diabetes: a FIELD trial substudy', *Internal Medicine Journal*, vol. 53, no. 11, pp. 2128-2131. https://doi.org/10.1111/imj.16270
- 165. Raymond, K, Nathan, S, Harrison, R & Meyer, L 2023, 'Health policy evaluation in rural and remote Australia: a qualitative exploration and lessons from the Northern Territory', Australian Health Review, vol. 47, no. 2, pp. 197-202. https://doi.org/10.1071/AH22255
- 166. Roberts, N, Carrigan, A, Clay-Williams, R, Hibbert, PD, Mahmoud, Z, Pomare, C, Fajardo Pulido, D, Meulenbroeks, I, Knaggs, GT, Austin, EE, Churruca, K, Ellis, LA, Long, JC, Hutchinson, K, Best, S, Nic Giolla Easpaig, B, Sarkies, MN, Francis Auton, E, Hatem, S, Dammery, G, Nguyen, M-T, Nguyen, HM, Arnolda, G, Rapport, F, Zurynski, Y, Maka, K & Braithwaite, J 2023, 'Innovative models of healthcare delivery: an umbrella review of reviews', BMJ Open, vol. 13, no. 2, e066270, pp. 1-11. https://doi.org/10.1136/bmjopen-2022-066270
- 167. Roberts, N, Carrigan, A, Hibbert, P, Clay-Williams, R, Austin, E, Fajardo Pulido, D, Meulenbroeks, I, Hatem, S, Nguyen, HM, Maka, K, Loy, G & Braithwaite, J 2023, 'Consumer and provider perspectives on Hospital in the Home: a qualitative study', Health and Social Care in the Community, vol. 2023, 7105751, pp. 1-11. https://doi.org/10.1155/2023/7105751
- 168. Rohilla, U, Ramarao, JP, Lane, J, Khatri, NN, Smith, J, Yin, K & Lau, A 2023, 'How general practitioners and patients discuss type 2 diabetes mellitus and cardiovascular diseases concerns during consultations: implications for digital health', *Digital Health*, vol. 9, pp. 1-19. https://doi.org/10.1177/20552076231176162
- 169. Ross, J, Poduval, S, Albury, C, Lau, A, Whitaker, N & Stevenson, F 2024, 'Achieving patient weighing in UK primary care. A conversation analytic study', *SSM Qualitative Research in Health*, vol. 5, 100384, pp. 1-11. https://doi.org/10.1016/j.ssmqr.2023.100384
- 170. Rountree-Harrison, D, Berkovsky, S & Kangas, M 2023, 'Heart and brain traumatic stress biomarker analysis with and without machine learning: a scoping review', International Journal of Psychophysiology, vol. 185, pp. 27-49. https://doi.org/10.1016/j.ijpsycho.2023.01.009
- 171. Safi, M, Clay-Williams, R, Grau, TU, Brandt, F & Thude, BR 2023, 'FRAM and LEAN as tools for describing and improving the referral process between outpatient clinics in a Danish Hospital: complementary or conflicting?', Safety Science, vol. 166, 106230, pp. 1-10. https://doi.org/10.1016/j.ssci.2023.106230
- 172. Sandalic, D, Tran, Y, Arora, M, Middleton, J, McBain, C, Myles, D, Pozzato, I & Craig, A 2023, 'Improving assessment of cognitive impairment after spinal cord injury: methods to reduce the risk of reporting false positives', *Journal of Clinical Medicine*, vol. 12, no. 1, 68, pp. 1-9. https://doi.org/10.3390/jcm12010068
- 173. Sanderson, B, Field, JD, Kocaballi, AB, Estcourt, LJ, Magrabi, F, Wood, EM & Coiera, EW 2023, 'Multicenter, multidisciplinary user-centered design of a clinical decision-support and simulation system for massive transfusion', *Transfusion*, vol. 63, no. 5, pp. 993-1004. https://doi.org/10.1111/trf.17315

- 174. Sanderson, BJ, Field, JD, Kocaballi, AB, Estcourt, LJ, Magrabi, F, Wood, EM & Coiera, E 2023, 'Clinical decision support versus a paper-based protocol for massive transfusion: impact on decision outcomes in a simulation study', *Transfusion*, vol. 63, no. 12, pp. 2225-2233. https://doi.org/10.1111/trf.17580
- 175. Saraei, M & Liu, S 2023, 'Attention-based deep learning approaches in brain tumor image analysis: a mini review', Frontiers in Health Informatics, vol. 12, 164, pp. 1-9. https://doi.org/10.30699/fhi.v12i0.493
- 176. Sarkies, M, Francis-Auton, E, Long, J, Roberts, N, Westbrook, J, Levesque, JF, Watson, DE, Hardwick, R, Sutherland, K, Disher, G, Hibbert, P & Braithwaite, J 2023, 'Audit and feedback to reduce unwarranted clinical variation at scale: a realist study of implementation strategy mechanisms', *Implementation Science*, vol. 18, no. 1, 71, pp. 1-18. https://doi.org/10.1186/s13012-023-01324-w
- 177. Sarkies, M, Gul, H, Pagano, L, Aungles, T, Finch, M & ISHCA Scientific Committee 2023, 'Proceedings of the 2nd Implementation Science Health Conference Australia: Sydney, NSW, Australia, 23-24 March 2023, *Implementation Science*, vol. 18, no. Supplement 2, 38, pp. 1-2. https://doi.org/10.1186/s13012-023-01292-1
- 178. Sarkies, MN, Testa, L, Best, S, Moullin, JC, Sullivan, D, Bishop, W, Kostner, K, Clifton, P, Hare, D, Brett, T, Hutchinson, K, Black, A, Braithwaite, J, Nicholls, SJ, Kangaharan, N, Pang, J, Abhayaratna, W, Horton, A & Watts, GF 2023, 'Barriers to and facilitators of implementing guidelines for detecting familial hypercholesterolaemia in Australia', Heart, Lung and Circulation, vol. 32, no. 11, pp. 1347-1353. https://doi.org/10.1016/j.hlc.2023.09.012
- 179. Sarkies, MN, Testa, L, Carrigan, A, Roberts, N, Gray, R, Sherrington, C, Mitchell, R, Close, JCT, McDougall, C & Sheehan, K 2023, 'Perioperative interventions to improve early mobilisation and physical function after hip fracture: a systematic review and meta-analysis', *Age and Ageing*, vol. 52, no. 8, afad154, pp. 1-11. https://doi.org/10.1093/ageing/afad154
- 180. Saunders, R, Crookes, K, Seaman, K, Ang, SGM, Bulsara, C, Bulsara, MK, Ewens, B, Gallagher, O, Graham, R, Gullick, K, Haydon, S, Hughes, J, Nguyen, K-H, O'Connell, B, Scaini, D & Etherton-Beer, C 2023, 'Frailty and pain in an acute private hospital: an observational point prevalence study', Scientific Reports, vol. 13, no. 1, 3345, pp. 1-8. https://doi.org/10.1038/s41598-023-29933-X
- 181. Schroeder, T, Dodds, L, Georgiou, A, Gewald, H & Siette, J 2023, 'Older adults and new technology: mapping review of the factors associated with older adults' intention to adopt digital technologies', *JMIR Aging*, vol. 6, e44564, pp. 1-21. https://doi.org/10.2196/44564
- 182. Schroeder, T, Seaman, K, Nguyen, A, Gewald, H & Georgiou, A 2023, 'Enablers and inhibitors to the adoption of mHealth apps by patients: a qualitative analysis of German doctors' perspectives', *Patient Education and Counseling*, vol. 114, 107865, pp. 1-7. https://doi.org/10.1016/j.pec.2023.107865
- 183. Schroeder, T, Seaman, K, Nguyen, AD, Gewald, H & Georgiou, A 2023, 'Social determinants of mobile health app adoption: a qualitative study of older adults' perceptions in Australia', Studies in Health Technology and Informatics, vol. 304, pp. 81-85. https://doi.org/10.3233/SHTI230376
- 184. Schuler, T, King, C, Matsveru, T, Back, M, Clark, K, Chin, D, Lilian, R, Gallego, B, Coiera, E & Currow, DC 2023, 'Wearable-triggered ecological momentary assessments are feasible in people with advanced cancer and their family

- caregivers: feasibility study from an outpatient palliative care clinic at a cancer center', *Journal of Palliative Medicine*, vol. 26, no. 7, pp. 980-985. https://doi.org/10.1089/jpm.2022.0535
- 185. Seaman, K, Huang, G, Wabe, N, Nguyen, A, Pinto, S & Westbrook, J 2023, 'Hospitalisations before and after entry into a residential aged care facility: an interrupted time series analysis', Australasian Journal on Ageing. https://doi.org/10.1111/ajag.13249
- 186. Seaman, K, Meulenbroeks, I, Nguyen, A, Silva, S, Wabe, N, Huang, G, Hibert, P, Paudel, P & Westbrook, J 2023, 'Innovative approaches to analysing aged care falls incident data: International Classification for Patient Safety and correspondence analysis', *International Journal for Quality in Health Care*, vol. 35, no. 4, mzado8o, pp. 1-16. https://doi.org/10.1093/intqhc/mzado8o
- 187. Sezgin, G, Dai, Z, McLeod, A, Pearce, C & Georgiou, A 2023, 'Difference in general practice telehealth utilisation associated with birth country during Covid-19 from two Australian states', Ethics, Medicine and Public Health, vol. 27, 100876, pp. 1-8. https://doi.org/10.1016/j.jemep.2023.100876
- 188. Sharan, RV & Rahimi-Ardabili, H 2023, 'Detecting acute respiratory diseases in the pediatric population using cough sound features and machine learning: a systematic review', International Journal of Medical Informatics, vol. 176, 105093, pp. 1-7. https://doi.org/10.1016/j.ijmedinf.2023.105093
- 189. Sharan, RV 2023, 'Cough sound detection from raw waveform using SincNet and bidirectional GRU', *Biomedical Signal Processing and Control*, vol. 82, 104580, pp. 1-8. https://doi.org/10.1016/j.bspc.2023.104580
- 190. Shetty, A, Baker, J, Kabil, G, Saavedra, A, Suster, CJE, Moscova, M, Iredell, J & Li, L 2023, 'Association between timing and adequacy of antibiotics and adverse outcomes in patients with sepsis and septic shock: a multicentre retrospective cohort study', *EMA Emergency Medicine Australasia*, vol. 35, no. 2, pp. 325-332. https://doi.org/10.1111/1742-6723.14143
- 191. Siette, J, Dodds, L, Sharifi, F, Nguyen, A, Baysari, M, Seaman, K, Raban, M, Wabe, N & Westbrook, J 2023, 'Usability and acceptability of clinical dashboards in aged care: systematic review', JMIR Aging, vol. 6, e42274, pp. 1-19. https://doi.org/10.2196/42274
- 192. Spanos, S, Singh, N, Laginha, BI, Arnolda, G, Wilkinson, D, Smith, AL, Cust, AE, Braithwaite, J & Rapport, F 2023, 'Measuring the quality of skin cancer management in primary care: a scoping review', *Australasian Journal of Dermatology*, vol. 64, no. 2, pp. 177-193. https://doi.org/10.1111/ajd.14023
- 193. Staccini, P, Lau, AYS & Section Editors for the IMIA Yearbook Section on Consumer Health Informatics 2023, 'Consumer informatics and One Health: shifting the focus from the individual to the globe. Findings from the Yearbook 2023 Section on Education and Consumer Health Informatics', Yearbook of Medical Informatics, vol. 32, no. 1, pp. 158-168. https://doi.org/10.1055/s-0043-1768749
- 194. Stark, Z, Boughtwood, T, Haas, M, Braithwaite, J, Gaff, CL, Goranitis, I, Spurdle, AB, Hansen, DP, Hofmann, O, Laing, N, Metcalfe, S, Newson, AJ, Scott, HS, Thorne, N, Ward, RL, Dinger, ME, Best, S, Long, JC, Grimmond, SM, Pearson, J, Waddell, N, Barnett, CP, Cook, M, Field, M, Fielding, D, Fox, SB, Gecz, J, Jaffe, A, Leventer, RJ, Lockhart, PJ, Lunke, S, Mallett, AJ, McGaughran, J, Mileshkin, L, Nones, K, Roscioli, T, Scheffer, IE, Semsarian, C, Simons, C, Thomas, DM, Thorburn, DR, Tothill, R, White, D, Dunwoodie, S, Simpson, PT, Phillips, P, Brion, MJ, Finlay, K, Quinn, MCJ, Mattiske, T, Tudini, E, Boggs, K, Murray, S,

- Wells, K, Cannings, J, Sinclair, AH, Christodoulou, J & North, KN 2023, 'Australian Genomics: outcomes of a 5-year n ational program to accelerate the integration of genomics in healthcare', *American Journal of Human Genetics*, vol. 110, no. 3, pp. 419-426. https://doi.org/10.1016/j.ajhg.2023.01.018
- 195. Surian, D, Wang, Y, Coiera, E & Magrabi, F 2023, 'Using automated methods to detect safety problems with health information technology: a scoping review', *Journal of the American Medical Informatics Association*, vol. 30, no. 2, ocac220, pp. 382-392. https://doi.org/10.1093/jamia/ocac220
- 196. Susanto, AP, Lyell, D, Widyantoro, B, Berkovsky, S & Magrabi, F 2023, 'Effects of machine learning-based clinical decision support systems on decision-making, care delivery, and patient outcomes: a scoping review', *Journal of the American Medical Informatics Association: JAMIA*, vol. 30, no. 12, pp. 2050-2063. https://doi.org/10.1093/jamia/ocad180
- 197. Sweller, N, Choi, AJ & Austin, E 2023, 'Gesture production at encoding supports narrative recall', *Psychological Research*. https://doi.org/10.1007/s00426-023-01886-w
- 198. Tabassum, M, Suman, AA, Suero-Molina, E, Pan, E, Di Ieva, A & Liu, S 2023, 'Radiomics and machine learning in brain tumors and their habitat: a systematic review', *Cancers*, vol. 15, no. 15, 3845, pp. 1-22. https://doi.org/10.3390/cancers15153845
- 199. Tag, B, Van Berkel, N, Verma, S, Zhao, BZH, Berkovsky, S, Kaafar, D, Kostakos, V & Ohrimenko, O 2023, 'DDoD: dual denial of decision attacks on human-AI teams', *IEEE Pervasive Computing*, vol. 22, no. 1, pp. 77-84. https://doi.org/10.1109/MPRV.2022.3218773
- 200. Tang, D, Tran, Y, McMahon, C, Turner, J, Amin, J, Sinha, K, Alam, MN, Wuthrich, V, Sherman, KA, Garcia, P, Mitchell, R, Braithwaite, J, Leigh, G, Lim, S, Shekhawat, GS, Rapport, F, Ferguson, M & Gopinath, B 2023, 'A protocol for the hearing impairment in adults: a longitudinal outcomes study (HALOS)', PLoS ONE, vol. 18, no. 3, e0283171, pp. 1-10. https://doi.org/10.1371/journal.pone.0283171
- 201. Taylor, N, McKay, S, Long, JC, Gaff, C, North, K, Braithwaite, J, Francis, JJ & Best, S 2023, 'Aligning intuition and theory: a novel approach to identifying the determinants of behaviours necessary to support implementation of evidence into practice', *Implementation Science*, vol. 18, no. 1, 29, pp. 1-17. https://doi.org/10.1186/s13012-023-01284-1
- 202. Teutsch, S, Berkhout, A, Raynes-Greenow, C, Zurynski, Y, Britton, PN, Jones, CA & APSU Neonatal HSV study advisory group 2023, 'Characteristics of neonatal herpes simplex central nervous system disease in Australia (1997–2020)', *Journal of Clinical Virology*, vol. 165, 105526, pp. 1-6. https://doi.org/10.1016/j.jcv.2023.105526
- 203. Teutsch, S, Zurynski, Y, Eslick, GD, Deverell, M, Christodoulou, J, Leonard, H, Dalkeith, T, Johnson, SLJ & Elliott, EJ 2023, 'Australian children living with rare diseases: health service use and barriers to accessing care', World Journal of Pediatrics, vol. 19, no. 7, pp. 701-709. https://doi.org/10.1007/s12519-022-00675-6
- 204. Thomas, J, Imai, C, Sezgin, G, Hardie, R-A, Weeding, S, Pearce, C, McLeod, A, McGuire, P, Datta, S, Li, J, Wabe, N, Saffi Franco, G, Dai, Z, De Mel, G, Gault, E, Sheikh, MK & Georgiou, A 2023, 'A framework for conducting policy-relevant primary care research: a COVID-19 case study in Australia', Australian Journal of Primary Health, vol. 29, no. 1, pp. 1-7. https://doi.org/10.1071/PY22174
- 205. Thomas, J, Li, J, Scowen, C, Eigenstetter, A & Georgiou, A 2023, 'Emergency department pathology order support tool (ED POST): a protocol using qualitative inquiry to inform

- design and development of a prototype to reduce low value care', Health Services and Outcomes Research Methodology. https://doi.org/10.1007/s10742-023-00314-1
- 206. Thomas, J, Sezgin, G, McGuire, P, Hardie, R-A, Franco, GS, Williamson, M & Georgiou, A 2023, 'A retrospective observational study of telehealth utilisation for mental health consultations during the COVID-19 pandemic in Australian general practice', Public Health Research and Practice, vol. 33, no. 3, e3332322, pp. 1-13. https://doi.org/10.17061/phrp3332322
- 207. Turnbull, J, MacLellan, J, Churruca, K, Ellis, LA, Prichard, J, Browne, D, Braithwaite, J, Petter, E, Chisambi, M & Pope, C 2023, 'A multimethod study of NHS 111 online', Health and Social Care Delivery Research, vol. 11, no. 5, pp. 1-104. https://doi.org/10.3310/YTRR9821
- 208. Urwin, R, Pavithra, A, McMullan, RD, Churruca, K, Loh, E, Moore, C, Li, L & Westbrook, J 2023, 'Hospital staff reports of coworker positive and unprofessional behaviours across eight hospitals: who reports what about whom?', BMJ Open Quality, vol. 12, no. 4, e002413, pp. 1-11. https://doi.org/10.1136/bmjoq-2023-002413
- 209. van Vliet, EJ, Soethout, J, Churruca, K, Braithwaite, J, Luxford, K, Stewart, J, Jaouni, S, Engel, C & Sarkies, M 2023, 'International approaches for implementing accreditation programmes in different healthcare facilities: a comparative case study in Australia, Botswana, Denmark, and Jordan', International Journal for Quality in Health Care, vol. 35, no. 2, mzado26, pp. 1-12. https://doi.org/10.1093/intqhc/mzado26
- 210. Vizheh, M, Allahdadian, M, Ghasemi-Tehrani, H, Muhidin, S, Hashemi, M & Dehghan, M 2023, 'Maternal and neonatal outcomes of COVID-19 infection in pregnancy', Archives of Iranian Medicine, vol. 26, no. 1, pp. 43-49. https://doi. org/10.34172/aim.2023.07
- 211. Vizheh, M, Rapport, F, Braithwaite, J & Zurynski, Y 2023, 'The impact of women's agency on accessing and using maternal healthcare services: a systematic review and meta-analysis', International Journal of Environmental Research and Public Health, vol. 20, no. 5, 3966, pp. 1-17. https://doi.org/10.3390/ijerph20053966
- 212. Vizheh, M, Zurynski, Y, Braithwaite, J & Rapport, F 2023, 'The impact of migration and settlement context on Iranian Women's agency in accessing and using reproductive healthcare services in Australia: a qualitative study', Health and Place, vol. 83, 103069, pp. 1-9. https://doi. org/10.1016/j.healthplace.2023.103069
- 213. Vizheh, M, Zurynski, Y, Braithwaite, J & Rapport, F 2024, 'Determinants of women's agency in accessing and utilising reproductive healthcare services; a systematic review', Culture, Health and Sexuality, vol. 26, no. 2, pp. 248-264. https://doi.org/10.1080/13691058.2023.2200814
- 214. Vogt, KS, Simms-Ellis, R, Grange, A, Griffiths, ME, Coleman, R, Harrison, R, Shearman, N, Horsfield, C, Budworth, L, Marran, J & Johnson, J 2023, 'Critical care nursing workforce in crisis: a discussion paper examining contributing factors, the impact of the COVID-19 pandemic and potential solutions', Journal of Clinical Nursing, vol. 32, no. 19-20, pp. 7125-7134. https://doi.org/10.1111/jocn.16642
- 215. Walsan, R, Mitchell, RJ & Harrison, R 2023, 'Adoption of out-of-pocket cost caps: an Australian perspective', Australian Health Review, vol. 47, no. 6, pp. 716-717. https://doi.org/10.1071/AH23197
- 216. Walsan, R, Mitchell, RJ, Braithwaite, J, Westbrook, J, Hibbert, P, Mumford, V & Harrison, R 2023, 'Is there an association between out-of-pocket hospital costs, quality

- and care outcomes? A systematic review of contemporary evidence', BMC Health Services Research, vol. 23, no. 1, 984, pp. 1-13. https://doi.org/10.1186/s12913-023-09941-3
- 217. Walters, JK, Sharma, A & Harrison, R 2023, 'Efficiency improvement strategies for public health systems: developing and evaluating a taxonomy in the Australian healthcare system', Healthcare (Switzerland), vol. 11, no. 15, 2177, pp. 1-13. https://doi.org/10.3390/healthcare11152177
- 218. Walters, JK, Sharma, A, Boyce, J & Harrison, R 2023, 'Analysis of centralized efficiency improvement practices in Australian public health systems', Journal of Healthcare Leadership, vol. 15, pp. 313-326. https://doi.org/10.2147/JHL.S435035
- 219. Wang, L, Liu, S, Jiang, S, Li, C, Lu, L, Fang, Y & Li, S 2023, 'Quantifying benefit-risk trade-offs toward prophylactic treatment among adult patients with hemophilia A in China: discrete choice experiment study', JMIR Public Health and Surveillance, vol. 9, e45747, pp. 1-11. https://doi.org/10.2196/45747
- 220. Wang, Y, Zhai, P, Jiang, S, Li, C & Li, S 2023, 'Blood donors' preferences toward incentives for donation in China', JAMA Network Open, vol. 6, no. 6, e2318320, pp. 1-12. https://doi.org/10.1001/jamanetworkopen.2023.18320
- 221. Wang, Y, Zhai, P, Zhang, Y, Jiang, S, Chen, G & Li, S 2023, 'Gauging Incentive Values and Expectations (G.I.V.E.) among blood donors for nonmonetary incentives: developing a preference elicitation instrument through qualitative approaches in Shandong, China', The Patient: Patient-Centered Outcomes Research, vol. 16, no. 6, pp. 593-606. https://doi. org/10.1007/s40271-023-00639-6
- 222. Ward, K, Vagholkar, S, Lane, J, Raghuraman, S & Lau, AYS 2023, 'Are chronic condition management visits translatable to telehealth? Analysis of in-person consultations in primary care', International Journal of Medical Informatics, vol. 178, 105197, pp. 1-14. https://doi. org/10.1016/j.ijmedinf.2023.105197
- 223. Webb, E, Bissett, B, Neeman, T, Bowden, F, Preston, E & Mumford, V 2023, 'Compression therapy is cost-saving in the prevention of lower limb recurrent cellulitis in patients with chronic edema', Lymphatic Research and Biology, vol. 21, no. 2, pp. 160-168. https://doi.org/10.1089/
- 224. Werner-Seidler, A, Li, S, Spanos, S, Johnston, L, O'Dea, B, Torok, M, Ritterband, LM, Newby, JM, Mackinnon, AJ & Christensen, H 2023, 'The effects of a sleep-focused smartphone application on insomnia and depressive symptoms: a randomised controlled trial and mediation analysis', Journal of Child Psychology and Psychiatry, vol. 64, no. 9, pp. 1324-1335. https://doi.org/10.1111/jcpp.13795
- 225. Willis, R, Jones, T, Hoiles, J, Hibbert, PD & Schultz, TJ 2023, 'What are the experiences of team members involved in root cause analysis? A qualitative study', BMC Health Services Research, vol. 23, no. 1, 1152, pp. 1-8. https://doi.org/10.1186/ s12913-023-10164-9
- 226. Wilson, NJ, Barratt, M, Jorgensen, M, Limbu, B, Donley, M, Buchholtz, M, Smith, V & Deb, S 2023, 'Training support workers about the overmedication of people with intellectual disabilities: an Australian pre-post pilot study', Journal of Intellectual Disability Research, vol. 67, no. 6, pp. 519-530. https://doi.org/10.1111/jir.13023
- 227. Woodman, L, Staples, L, Karin, E, Solterbeck, K, Burns, N, Mitchell, R & Nielssen, O 2023, 'Rates and causes of mortality among the homeless in Sydney', Australasian Psychiatry, vol. 31, no. 4, pp. 469-474. https://doi. org/10.1177/10398562231176734

- 228. Wright, M, Giddings, H, Rahman, B & Lord, RV 2023, 'Use of oral contrast for CT scanning and time to diagnosis and treatment of acute appendicitis', ANZ Journal of Surgery, vol. 93, no. 1-2, pp. 115-119. https://doi.org/10.1111/ans.18194
- 229. Xu, Y, Harris, K, Pouncey, AL, Carcel, C, Low, G, Peters, SAE & Woodward, M 2023, 'Sex differences in risk factors for incident peripheral artery disease hospitalisation or death: cohort study of UK Biobank participants', PLoS ONE, vol. 18, no. 10, e0292083, pp. 1-18. https://doi.org/10.1371/journal. pone.0292083
- 230. Yin, M-Z, Gu, Y-Y, Shu, J-T, Zhang, B, Su, M, Zhang, L-P, Jiang, Y-H & Qin, G 2023, 'Cost-effectiveness of cytomegalovirus vaccination for females in China: A decision-analytical Markov study', Vaccine, vol. 41, no. 40, pp. 5825-5833. https://doi.org/10.1016/j.vaccine.2023.08.011
- 231. Younan, B, Jorgensen, M, Chan, J, Winata, T & Gillies, D 2023, 'Restrictive practice use in people with neurodevelopmental disorders: a systematic review', Advances in Neurodevelopmental Disorders. https://doi.org/10.1007/s41252-023-00367-w
- 232. Zacharakis, A, Ackermann, K, Hughes, C, Lam, V & Li, L 2023, 'Combining C-reactive protein and quick sequential organ failure assessment (qSOFA) to improve prognostic accuracy for sepsis and mortality in adult inpatients: a systematic review', *Health Science Reports*, vol. 6, no. 4, e1229, pp. 1-9. https://doi.org/10.1002/hsr2.1229
- 233. Zhang, J, Shi, Y & Huang, G 2023, 'Expected length of stay at residential aged care facilities in Australia: current and future', *Journal of Population Research*, vol. 40, no. 4, 24, pp. 1-30. https://doi.org/10.1007/s12546-023-09320-z
- 234. Zurynski, Y, Carrigan, A, Meulenbroeks, I, Sarkies, MN, Dammery, G, Halim, NK, Lake, R, Davis, E, Jones, T & Braithwaite, J 2023, 'Transition models of care for type 1 diabetes: a systematic review', *BMC Health Services Research*, vol. 23, no. 1, 779, pp. 1-15. https://doi.org/10.1186/s12913-023-09644-9
- 235. Zurynski, Y, Ludlow, K, Testa, L, Augustsson, H, Herkes-Deane, J, Hutchinson, K, Lamprell, G, McPherson, E, Carrigan, A, Ellis, LA, Dharmayani, PNA, Smith, C, Richardson, L, Dammery, G, Singh, N & Braithwaite, J 2023, 'Built to last? Barriers and facilitators of healthcare program sustainability: a systematic integrative review', *Implementation Science*, vol. 18, 62, pp. 1-21. https://doi.org/10.1186/s13012-023-01315-x
- 236. Zurynski, Y, Munns, CF, Sezgin, G, Imai, C & Georgiou, A 2023, 'Vitamin D testing in children and adolescents in Victoria, Australia: are testing practices in line with global recommendations?', Archives of Disease in Childhood, vol. 108, no. 9, pp. 742-747. https://doi.org/10.1136/archdischild-2022-325000

LETTERS TO THE EDITOR AND EDITORIALS

- Beard, JR & Chen, M 2023, 'Intrinsic capacity as a composite outcome measure: opportunities and challenges', *Journal* of Nutrition, Health and Aging, vol. 27, no. 6, pp. 398-400. https://doi.org/10.1007/s12603-023-1923-z
- Braithwaite, J, Pichumani, A & Crowley, P 2023, 'Tackling climate change: the pivotal role of clinicians', *British Medical Journal*, vol. 382, no. e076963, e076963, pp. 1-6. https://doi. org/10.1136/bmj-2023-076963
- 3. Coiera, EW, Verspoor, K & Hansen, DP 2023, 'We need to chat about artificial intelligence', *Medical Journal of Australia*, vol. 219, no. 3, pp. 98-100. https://doi.org/10.5694/mja2.51992

- Foo, D, Mahadeva, J, Lopez, F, Ellis, LA, Churruca, K, Dammery, G, Willcock, S & Braithwaite, J 2023, 'High-performing primary care: reinvigorating general practice as a learning health system', *British Journal of General Practice*, vol. 73, no. 726, pp. 8-9. https://doi.org/10.3399/bjgp23X731505
- Hardie, RA, Sezgin, G, Pont, LG, Thomas, J, Prgomet, M, McGuire, P, Pearce, C & Georgiou, A 2023, 'Psychotropic medication prescribing for children and adolescents by general practitioners during the COVID-19 pandemic', Medical Journal of Australia, vol. 219, no. 1, pp. 26-27. https://doi.org/10.5694/mja2.51942
- Harrison, R & Janes, G 2023, 'Integrating the sciences of improvement, implementation and managing change in nursing practice', *Journal of Clinical Nursing*, vol. 32, no. 11-12, pp. e19-e21. https://doi.org/10.1111/jocn.16605
- Harrison, R, She, EN, Debono, D, Chauhan, A & Newman, B 2023, 'Creating space for theory when codesigning healthcare interventions', *Journal of Evaluation in Clinical Practice*, vol. 29, no. 4, pp. 572-575. https://doi. org/10.1111/jep.13720
- 8. Jiang, S, Wang, H & Gu, Y 2023, 'Genome sequencing for newborn screening an effective approach for tackling rare diseases', *JAMA Network Open*, vol. 6, no. 9, e2331141, pp. 1-3. https://doi.org/10.1001/jamanetworkopen.2023.31141
- Mannion, R, Exworthy, M, Wiig, S & Braithwaite, J 2023, 'The power of autonomy and resilience in healthcare delivery', *British Medical Journal*, vol. 382, e073331, pp. 1-4. https://doi.org/10.1136/bmj-2022-073331
- Mitchell, RJ, Burns, N, Glozier, N & Nielssen, O 2023, 'Response from Authors', Criminal Behaviour and Mental Health, vol. 33, no. 5, pp. 397-398. https://doi.org/10.1002/ cbm.2304
- Newman, B, Sarwar, M, Chauhan, A & Harrison, R 2024, 'Co-facilitation to foster equity in codesign: mechanisms underpinning practice', *Patient Education and Counseling*, vol. 118, 108052, pp. 1-2. https://doi.org/10.1016/j. pec.2023.108052
- 12. Raymond, K, Haddock, R, Nathan, S, Harrison, R & Meyer, L 2023, 'Value-based public health: moving beyond value-based health care to support a wellbeing economy', Health Promotion Journal of Australia, vol. 34, no. 3, pp. 675-680. https://doi.org/10.1002/hpja.736
- Shetty, A, Kabil, G & Li, L 2023, 'Response to Re: Association between timing and adequacy of antibiotics and adverse outcomes in patients with sepsis and septic shock: a multicentre retrospective cohort study', EMA - Emergency Medicine Australasia, vol. 35, no. 2, pp. 362. https://doi. org/10.1111/1742-6723.14178
- Sintchenko, V & Coiera, E 2023, 'The case for including microbial sequences in the electronic health record', *Nature Medicine*, vol. 29, no. 1, pp. 22-25. https://doi.org/10.1038/ s41591-022-02157-8
- 15. Smaggus, A, Long, JC, Ellis, LA, Clay-Williams, R & Braithwaite, J 2023, 'Investigating resilience in healthcare: easier said than done? A response to the recent commentaries', *International Journal of Health Policy and Management*, vol. 12, no. 1, 7682, pp. 1-3. https://doi.org/10.34172/ijhpm.2022.7682
- 16. Tran, Y, Ellis, LA, Clay-Williams, R, Churruca, K & Wiig, S 2023, 'Editorial: occupational health and organizational culture within a healthcare setting: challenges, complexities, and dynamics', Frontiers in Public Health, vol. 11, 1327489, pp. 1-3. https://doi.org/10.3389/fpubh.2023.1327489

- 17. Wiig, S, Bø Lyng, H, Greenfield, D & Braithwaite, J 2023, 'Care in the future: reconciling health system and individual resilience', *International Journal for Quality in Health Care*, vol. 35, no. 4, mzado82, pp. 1-2. https://doi.org/10.1093/ intqhc/mzado82
- Zhou, M & Berkovsky, S 2023, '2022 TiiS Best Paper Announcement', ACM Transactions on Interactive Intelligent Systems, vol. 13, no. 3, 19. https://doi.org/10.1145/3615590

FULL CONFERENCE PAPERS

- Chen, F, Billinghurst, M, Zhou, M & Berkovsky, S 2023, Proceedings of the 28th International Conference on Intelligent User Interfaces: IUI 2023. in Proceedings of the 28th International Conference on Intelligent User Interfaces: IUI 2023. Association for Computing Machinery, New York, 28th International Conference on Intelligent User Interfaces, IUI 2023, Sydney, Australia, 27/03/23.
- Goirand, M, Austin, E & Clay-Williams, R 2023, Engaging stakeholders in a substantive and transparent way when implementing ethics in medical AI: a qualitative study. in A Bamgboje-Ayodele, M Prgomet, C Kuziemsky, P Elkin & C Nohr (eds), Context sensitive health informatics and the pandemic boost: All systems go!. Studies in Health Technology and Informatics, vol. 304, IOS Press, Amsterdam, pp. 101-102, Context Sensitive Health Informatics Conference, Sydney, Australia, 5/07/23. https://doi.org/10.3233/SHTI230380
- Gunawan, R, Tran, Y, Zheng, J, Nguyen, H & Chai, R 2023, Implementing natural image quality evaluator for performance indicator on noise artefacts recovery in CT scan. in EMBC 2023: 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Conference: proceedings. Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS, Institute of Electrical and Electronics Engineers (IEEE), Piscataway, NJ, pp. 1-4, Annual International Conference of the IEEE Engineering in Medicine and Biology Conference (45th: 2023), Sydney, New South Wales, Australia, 24/07/23. https://doi. org/10.1109/EMBC40787.2023.10340822
- Jose, L, Berkovsky, S, Xiong, H, Mascolo, C & Sharan, RV 2023, Denoising cough sound recordings using neural networks. in The 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Institute of Electrical and Electronics Engineers (IEEE), Annual International Conference of the IEEE Engineering in Medicine and Biology Conference (45th: 2023), Sydney, New South Wales, Australia, 24/07/23.
- Kamalakkannan, A, Sezgin, G, McLeod, A, Pearce, C, Georgiou, A, Prgomet, M & Weeding, S 2023, Classification of Long COVID from general practitioner diagnosis text. in A Bamgboje-Ayodele, M Prgomet, CE Kuziemsky, P Elkin & C Nøhr (eds), Context Sensitive Health Informatics and the Pandemic Boost: All Systems Gol. Studies in Health Technology and Informatics, vol. 304, IOS Press, Amsterdam, pp. 124-125, Context Sensitive Health Informatics Conference, Sydney, Australia, 5/07/23. https://doi.org/10.3233/ SHTI230387
- 6. Li, J, Prgomet, M, Baysari, M & Georgiou, A 2023, Identifying diagnostic stewardship mechanisms in the electronic test result management process: preliminary findings from a scoping review. in A Bamgboje-Ayodele, M Prgomet, C Kuziemsky, P Elkin & C Nohr (eds), Context sensitive health informatics and the pandemic boost: All systems go!. Studies in Health Technology and Informatics, vol. 304, IOS Press, Amsterdam, pp. 72-73, Context Sensitive Health Informatics Conference, Sydney, Australia, 5/07/23. https://doi.org/10.3233/SHTI230372

- Prgomet, M, Hardie, R-A, Sezgin, G, Thomas, J, Pearce, C, McGuire, P, Weeding, S, McLeod, A & Georgiou, A 2023, Telehealth uptake and impact on care activities in Australian general practice during the COVID-19 pandemic. in M Giacomini, L Stoicu-Tivadar, G Balestra, A Benis, S Bonacina, A Bottrighi, TM Deserno, P Gallos, L Lhotska, S Marceglia, AC Pazos Sierra, S Rosati & L Sacchi (eds), Telehealth ecosystems in practice: Proceedings of the EFMI Special Topic Conference 2023. Studies in Health Technology and Informatics, vol. 309, IOS Press, Amsterdam, pp. 257-261. https://doi.org/10.3233/SHTI230792
- Rohit Chitnis, S, Liu, S, Dash, T, Verlekar, T, Di Ieva, A, Berkovsky, S, Vig, L & Srinivasan, A 2023, Domain-specific pre-training improves confidence in whole slide image classification. in *IEEE EMBC 2023*. vol. 2023, Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual International Conference, Institute of Electrical and Electronics Engineers (IEEE), Sydney, pp. 1-4, Annual International Conference of the IEEE Engineering in Medicine and Biology Conference (45th: 2023), Sydney, New South Wales, Australia, 24/07/23. https://doi.org/10.1109/EMBC40787.2023.10340659
- Tabassum, M, Suman, AA, Russo, C, Di Ieva,
 A & Liu, S 2023, A Deep Learning Framework for skull
 stripping in brain MRI. in *IEEE EMBC 2023*. Institute of
 Electrical and Electronics Engineers (IEEE), Sydney, pp. 1-4,
 Annual International Conference of the IEEE Engineering in
 Medicine and Biology Conference (45th: 2023), Sydney,
 New South Wales, Australia, 24/07/23. https://doi.
 org/10.1109/EMBC40787.2023.10340846
- 10. Xu, S, Xiong, H, Xu, Q, Yao, T, Wang, Z & Wang, Z 2023, Online visual SLAM adaptation against catastrophic forgetting with cycle-consistent contrastive learning. in 2023 IEEE International Conference on Robotics and Automation (ICRA). Institute of Electrical and Electronics Engineers (IEEE), London, pp. 6196-6202, 2023 IEEE International Conference on Robotics and Automation (ICRA 2023), London, United Kingdom, 29/05/23. https://doi.org/10.1109/ICRA48891.2023.10161464

CONFERENCE ABSTRACTS/POSTERS

- Bouttell, J & Partington, A 2023, 'An introduction to early health technology assessment', HTAi 2023 Annual Meeting, Adelaide, Australia, 24/06/23 - 28/06/23.
- Carrigan, A, Dammery, G, Singh, N, Lake, R, Meulenbroeks, I, Sarkies, M, Halim, N, Davis, E, Jones, TW, Braithwaite, J & Zurynski, Y 2023, 'Models of care for children newly diagnosed with Type 1 Diabetes: a systematic review', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 30/08/23. https://epostersonline.com/isqua2023/poster/p580
- Chauhan, A 2023, 'Enhancing medication safety in cancer care', Macquarie University ECR Showcase 2023, 23/11/23 -23/11/23.
- Chauhan, A, Harrison, R, Newman, B & Sarwar, M 2023, "Making it meaningful": co-designing a medication safety intervention with service users, International Forum on Quality and Safety in Healthcare 2023, Melbourne, Australia, 30/10/23 - 1/11/23.
- Dammery, G, Leask, E, Carrigan, A & Braithwaite, J 2023, 'Climate change is coming, are health systems prepared? Findings from a systematic review', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 380-381.

- de Groot, A, Hutchinson, K, Lingam, R, Fletcher, J, Smithers-Sheedy, H, Bula, K, Collings, D & Zurynski, Y 2023, 'Exploring the experiences of families of children with medical complexity accessing a rural care coordination service', 3rd Asia Pacific conference on Integrated Care, Sydney, Australia, 13/11/23 - 15/11/23.
- Ellis, L, Churruca, K, Falkland, E & Henderson, S 2023, 'Safety culture: the importance of harmonious, robust and brief measurement', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 430-431.
- Ellis, L, Saba, M, Long, JC, Bø Lyng, H, Haraldseid-Driftland, C, Churruca, K, Wiig, S, Austin, E, Carrigan, A, Clay-Williams, R & Braithwaite, J 2023, 'Resilient health care research during COVID-19: a scoping review of study methods, tools and factors that develop resilience', Resilient Health Care Society Summer Meeting, Florida, United States, 23/05/23 - 25/05/23.
- Ellis, LA, Fisher, G, Dammery, G & Braithwaite, J 2023, 'Learning health systems in primary care: identifying barriers and enablers to implementation and evaluation', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23. https:// epostersonline.com/isqua2023/poster/isqua2023-abs-2190
- Ellis, LA, Saba, M, Lyng, HB & Braithwaite, J 2023, 'Resilient Health Care research during COVID-19: identification of the factors that develop resilient performance', 3rd Asia Pacific conference on Integrated Care, Sydney, Australia, 13/11/23 - 15/11/23.
- Fisher, G, Saba, M, Ellis, L & Braithwaite, J 2023, 'Overcoming the roadblocks to Learning Health Systems in General Practice: a framework analysis', 8th annual EnCouRage Research Symposium, Sydney, Australia, 25/09/23 - 25/09/23.
- Foo, D, Badr, C, Vagholkar, S, Ellis, L, Spanos, S, Fisher, G, Mahadeva, J & Willcock, S 2023, 'Thriving in a crisis: effective and sustainable practice models', WONCA World Conference 2023, Sydney, Australia, 26/10/23 - 29/10/23 pp. 209.
- Foo, D, Ellis, L, Willcock, S & Braithwaite, J 2023, 'Direct-to-consumer telemedicine: a scoping review, bibliometric analysis and implications for future research and practice', WONCA World Conference 2023, Sydney, Australia, 26/10/23 29/10/23 pp. 211.
- 14. Foo, D, Mahadeva, J, Spanos, S, Fisher, G & Ellis, L 2023, 'Learning health systems and the future of general practice', WONCA World Conference 2023, Sydney, Australia, 26/10/23 - 29/10/23 pp. 210.
- 15. Harrison, R, Kohler, F, Adams, C, Hay, L, Newman, B, Mitchell, R, Iqbal, M, Walsan, R, Ellis, LA, Manias, E & Churruca, K 2023, 'Providing high value care for older adults in New South Wales (NSW): a mixed-methods analysis of clinician's experiences', Australian and New Zealand Society for Geriatric Medicine Annual Scientific Meeting, Brisbane, Australia, 2/05/23 5/05/23.
- 16. Hibbert, P, Ash, R, Molloy, C & Braithwaite, J 2023, 'Why do aged care consumers not receive safe and effective care? A world's first analysis of accreditation reports', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 30/08/23 pp. 200-201.
- Hibbert, P, Molloy, C, Arnolda, G & Braithwaite, J 2023, 'What is the level of evidence-based care delivered to residents of aged care facilities?', ISQua 39th International

- Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 30/08/23 pp. 205-206.
- 18. Hibbert, P, Molloy, C, Schultz, TJ & Braithwaite, J 2023, 'Comparing rates of adverse events detected in incident reporting and the global trigger tool: a systematic review', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 145-146.
- 19. Hutchinson, K, Lewis, S, Schutz, A, Carr, S, Reynolds, M, Goodwin, N & Hogden, A 2023, 'Review of best practices of integrated care for people living with Motor Neurone Disease', 23rd International Conference for Integrated Care, Antwerp, Belgium, 22/05/23 - 24/05/23.
- Hutchinson, K, Lingam, R, Smithers-Sheedy, H, Bula, K, Collings, D & Zurynski, Y 2023, 'Integrated care for children in rural Australia: barriers and enablers during early implementation', 23rd International Conference for Integrated Care, Antwerp, Belgium, 22/05/23 - 24/05/23.
- Hutchinson, K, Lingam, R, Smithers-Sheedy, H, Bula, K, Diana, C & Zurynski, Y 2023, 'Care coordination for children in rural New South Wales: barriers and enablers during early implementation', Implementation Science Health Conference Australia 2023, Sydney, Australia, 23/03/23 - 24/03/23.
- 22. Hutchinson, K, Schutz, A, Hogden, A, Carr, S, Heard, S, Reynolds, M & Goodwin, N 2023, 'Implementation evaluation of a motor neurone disease multidisciplinary clinic informing solutions to improve connected care', 3rd Asia Pacific conference on Integrated Care, Sydney, Australia, 13/11/23 15/11/23.
- Hutchinson, K, Schutz, A, Hogden, A, Reynolds, M, Heard, S, Carr, S & Goodwin, N 2023, 'Enablers and barriers to delivering a motor neurone disease multidisciplinary clinic in regional New South Wales, Australia', 23rd International Conference for Integrated Care, Antwerp, Belgium, 22/05/23 - 24/05/23.
- 24. Hutchinson, K, Zurynski, Y, Smithers-Sheedy, H, Diana, C, Bula, K, Preddy, J & Lingam, R 2023, 'Providing care coordination to children with medical complexity in rural New south Wales: implementation experiences from four local health districts', 3rd Asia Pacific conference on Integrated Care, Sydney, Australia, 13/11/23 15/11/23.
- 25. Karnon, J, Le Fevre, J, Reeves, P, Keng Ho, P & Partington, A 2023, 'Hospital-based HTA for health service delivery models: comparing, contrasting and learning from experience', Health Technology Assessment (HTAi) 2023 Annual Meeting, Adelaide, Australia, 24/06/22 - 28/06/23.
- Leask, E, Ellis, LA, Dammery, G & Braithwaite, J 2023, 'Climate change and the increased burden on mental health services: the importance of workforce preparedness', 8th annual EnCouRage Research Symposium, Sydney, Australia, 25/09/23 - 25/09/23.
- Liu, S 2023, 'Artificial Intelligence in medical image computing', International Conference on Nano Bio Intelligence, Sydney, Australia, 15/06/23 - 18/06/23 pp. 210.
- Long, JC, Best, S, Christodoulou, J & Braithwaite, J 2023, 'Electronic resources to address needs of people with rare diseases', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 333-334.
- 29. Mitsutake, S, Sa, Z, Long, J, Braithwaite, J, Levesque, J-F, Watson, DE, Close, J & Mitchell, R 2023, 'Role of frailty risk for fracture-related hospital readmission for older adults after a hip fracture', 56th AAG Conference, Gold Coast,

- Australia, 14/11/23 17/11/23. https://aag.eventsair.com/Qui ckEventWebsitePortal/56aagconference/program/Agenda/ AgendaItemDetail?id=bf4afo16-db19-1eff-6891-3aob2ff6c405
- 30. Mumford, V, Raban, M, Li, L & Westbrook, J 2023, 'Measuring actual harm from medication administration errors in an acute paediatric hospital', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 384-385.
- 31. Osman, S, Churruca, K, Ellis, LA, Luo, D & Braithwaite, J 2023, 'A critical interpretive synthesis of the unintended consequences of telehealth in Australia: international applications to low-, middle- and high-income countries', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23. https://epostersonline.com/isqua2023/poster/p473
- 32. Osman, S, Churruca, K, Ellis, LA, Luo, D & Braithwaite, J 2023, 'Does telehealth encourage "lazy medicine"? a qualitative study on the unintended consequences of telehealth in rural Australia using systems archetypes', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23. https://epostersonline.com/isqua2023/poster/isqua2023abs-2330
- 33. Owais, S, Arnolda, G, Lamprell, K & Braithwaite, J 2023, 'Cancer patient diagnosis experience and care quality', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 168-169.
- 34. Proctor, C, Dean, C & Preda, V 2023, 'Mapping the Macquarie MD program for graduate capabilities in research', Australian & New Zealand Association for Health Professional Educators (ANZAHPE) 2023 Conference, 26/06/23 - 29/06/23.
- Proctor, C, Dean, C & Preda, V 2023, 'Mapping the Macquarie MD program for graduate capabilities in research', Australian & New Zealand Association for Health Professional Educators (ANZAHPE) 2023 Conference, 26/06/23 - 29/06/23.
- 36. Ransolin, N, Saurin, TA, Clay-Williams, R, Formoso, CT & Rapport, F 2023, 'A framework for the built environment supportive of resilient performance in the connecting areas of an Intensive Care Unit', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23. https://doi.org/https:// epostersonline.com/isqua2023/poster/isqua2023-abs-1490
- 37. Ransolin, N, Saurin, TA, Clay-Williams, R, Formoso, CT & Rapport, F 2023, 'The built environment knowledge for resilient performance in hospital internal logistics', 8th EnCouRage Symposium, Sydney, Australia, 25/09/23.
- 38. Ransolin, N, Saurin, TA, Clay-Williams, R, Formoso, CT, Rapport, F & Cartmill, J 2023, 'Applying built environment knowledge to improve surgical services', National Conference of the Human Factors and Ergonomics Society of Australia (HFESA), Adelaide, Australia, 19/11/23 - 22/11/23.
- 39. Saba, M, Ellis, L, Falkland, E & Churruca, K 2023, 'Safety culture in residential aged care facilities: an integrative review', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23.
- 40. Saba, M, Ellis, LA, Falkland, E & Churruca, K 2023, 'Safety culture in residential aged care facilities: an integrative review', 8th annual EnCouRage Research Symposium, Sydney, Australia, 25/09/23 - 25/09/23.
- Silva, SSM, Wabe, N & Westbrook, JI 2023, 'Dynamic health status monitoring using aged care quality indicators for better care: an innovative approach using mixture

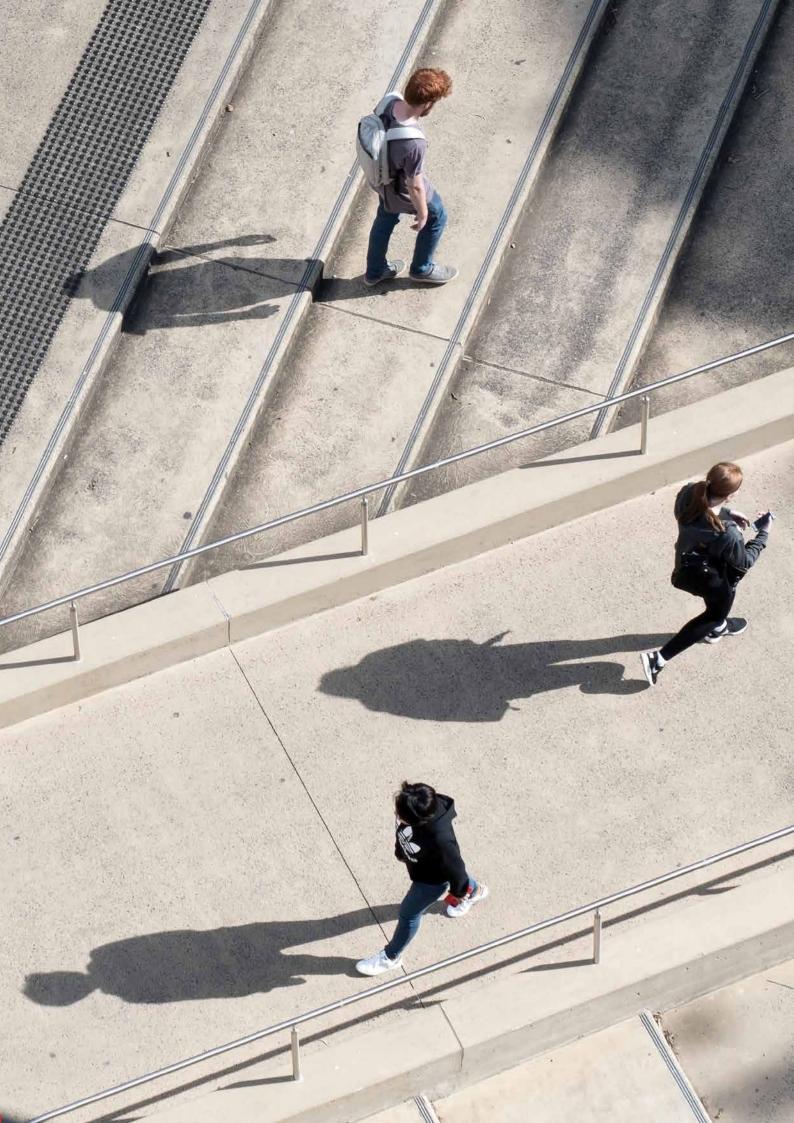
- hidden Markov models', The 25th International Congress on Modelling and Simulation, Darwin, Australia, 9/07/23 -14/07/23 pp. 873.
- 42. Smith, K-L, Zurynski, Y, Dammery, G & Braithwaite, J 2023, 'Organisational culture as a driver of learning health systems', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 382-383.
- 43. Spanos, S, Hutchinson, K, Ryder, T, Rapport, F, Goodwin, N & Zurynski, Y 2023, 'Integrated care in epilepsy: a scoping review of the components of health and social care delivery.', 8th annual EnCouRage Research Symposium, Sydney, Australia, 25/09/23 - 25/09/23.
- 44. Spanos, S, Parker, B, O'Moore, K, Newby, J & Whitton, A 2023, 'Barriers and facilitators to implementing blended models of care into psychology services in Australia', Implementation Science Health Conference Australia 2023, Sydney, Australia, 23/03/23 - 24/03/23.
- 45. Spanos, S, Singh, N, Laginha, BI, Arnolda, G, Wilkinson, D, Smith, AL, Cust, AE, Braithwaite, J & Rapport, F 2023, 'Skin cancer in primary care: how is quality measured?', ISQua's 39th International Conference, Seoul, 27/08/23 - 30/08/23. https://epostersonline.com/isqua2023/poster/p718
- 46. Stöcker, A, Braithwaite, J, Kuntz, L & Pfaff, H 2023, 'Transformational leadership and social capital as long-term determinants of patient safety: a Parsonian approach', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 412.
- Thomas, J, Prgomet, M & Georgiou, A 2023, 'A qualitative study of long COVID: perspectives from general practice', Long COVID Conference, Melbourne, Australia, 1/09/23 -1/09/23.
- 48. Walsan, R, Mitchell, R, Braithwaite, J, Westbrook, J, Hibbert, P, Mumford, V & Harrison, R 2023, 'Is paying higher hospital out of pocket payments associated with better healthcare quality?', International Forum on Quality and Safety in Healthcare 2023, Melbourne, Australia, 30/10/23 - 1/11/23.
- 49. Westbrook, JI, Urwin, R, McMullan, R & Badgery-Parker, T 2023, 'Hospital staff experiences of unprofessional behaviours by co-workers following an organisational culture change program at five Australian hospitals', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 394-395.
- Wiles, L, Molloy, C, Hibbert, P & Braithwaite, J 2023, 'Can algorithms automatically extract quality indicator (QI) assessments from resident records in aged care facilities?', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 207-208.
- Zurynski, Y, Ellis, L, Dammery, G & Carrigan, A 2023, 'Access and affordability of healthcare for Australians living with chronic disease: the health of universal coverage', ISQua 39th International Conference 2023, Seoul, Korea, Democratic People's Republic of, 27/08/23 - 30/08/23 pp. 400-401.
- Zurynski, Y, Hutchinson, K, Smithers-Sheedy, H, Diana, C, Bula, K, Preddy, J & Lingam, R 2023, 'It can be a lonely job: role experiences of paediatric care coordinators working in rural Australia', 3rd Asia Pacific conference on Integrated Care, Sydney, Australia, 13/11/23 - 15/11/23.

COMMISSIONED REPORTS

Cutler, H, Norman, A, Aghdaee, M, Bilgrami, A & Abiona, O 2023, Getting more value from mental healthcare funding and investment: Consultation paper. Macquarie

- University, Macquarie Park, NSW. https://www.mq.edu. au/__data/assets/pdf_file/0005/1271750/Embedding-value_ Consultation-paper_230809.pdf
- Degotardi, S, Amin, J, Bull, R, Dahm, MR, Donovan, M, Hadley, F, Harrison, LJ, Sadow, L, Trăn, D, Waniganayake, M, Wong, S & Zurynski, Y 2023, Harnessing the health communication potential of the early childhood sector. Macquarie University, North Ryde, NSW.
- Ellis, LA, Saba, M, Hibbert, P, Schultz, T, Falkland, E, Patel, R & Braithwaite, J 2023, Southern Adelaide Local Health Network Safety Culture Survey Report.
- Ellis, LA, Saba, M, Hibbert, P, Schultz, T, Falkland, E, Patel, R & Braithwaite, J 2023, Southern Adelaide Local Health Network Safety Culture Survey: Allied Health Division Report.
- Ellis, LA, Saba, M, Hibbert, P, Schultz, T, Falkland, E, Patel, R
 Braithwaite, J 2023, Southern Adelaide Local Health Network Safety Culture Survey: Corporate & Executive Division Report.
- 6. Ellis, LA, Saba, M, Hibbert, P, Schultz, T, Falkland, E, Patel, R & Braithwaite, J 2023, Southern Adelaide Local Health Network Safety Culture Survey: Medicine, Cardiac & Critical Care Division Report.
- Ellis, LA, Saba, M, Hibbert, P, Schultz, T, Falkland, E, Patel, R & Braithwaite, J 2023, Southern Adelaide Local Health Network Safety Culture Survey: Mental Health Division Report.
- 8. Ellis, LA, Saba, M, Hibbert, P, Schultz, T, Falkland, E, Patel, R & Braithwaite, J 2023, Southern Adelaide Local Health Network Safety Culture Survey: Rehabilitation, Aged and Palliative Care Division Report.
- 9. Ellis, LA, Saba, M, Hibbert, P, Schultz, T, Falkland, E, Patel, R & Braithwaite, J 2023, Southern Adelaide Local Health Network Safety Culture Survey: Surgery and Perioperative Medicine Division Report.
- Ellis, LA, Saba, M, Hibbert, P, Schultz, T, Falkland, E, Patel, R & Braithwaite, J 2023, Southern Adelaide Local Health Network Safety Culture Survey: Women's & Childrens Division Report.
- Fitzpatrick, E, Merchant, A, Raban, MZ & Westbrook, JI 2023, 'How free-text fields can lead to medication errors' Health Innovation Series, vol. e-Medication Safety, no. 14. https://doi.org/10.25949/BEDT-WG68
- 12. Fitzpatrick, E, Merchant, A, Raban, MZ & Westbrook, JI 2023, 'Is your administration documentation accurate? Check fields that auto-populate!' *Health Innovation Series*, vol. e-Medication Safety, no. 17, pp. 1-2. https://doi.org/10.25949/E50T-VD39
- Fitzpatrick, E, Merchant, A, Raban, MZ & Westbrook, JI 2023, 'Stop! Is that weight out-of-date? preventing dose errors in children' Health Innovation Series, vol. e-Medication Safety, no. 10. https://doi.org/10.25949/76Q9-B991
- 14. Fitzpatrick, E, Merchant, A, Westbrook, JI & Raban, MZ 2023, 'First in line: optimising order sentence display reduces selection errors' *Health Innovation Series*, vol. e-Medication Safety, no. 13. https://doi.org/10.25949/0EFY-SV08
- Fitzpatrick, E, Merchant, A, Westbrook, JI & Raban, MZ 2023, 'Making order sentences work for you: search tips for prescribers' *Health Innovation Series*, vol. e-Medication Safety, no. 12. https://doi.org/10.25949/2QEY-3D18
- 16. Harrison, R & Walsan, R 2023, Evaluation of 24/7 eICU Model of Care: patient experience.
- 17. Harrison, R, Walsan, R, Adams, C, Newman, B, Ellis, LA, Mitchell, R, Manias, E & Carrigan, A 2023, *Clinician experience of providing diabetes care in NSW*.

- Merchant, A, Fitzpatrick, E, Raban, MZ & Westbrook, JI 2023, 'A mix of prescribing systems may be a recipe for disaster' Health Innovation Series, vol. e-Medication Safety, no. 16, pp. 1-2. https://doi.org/10.25949/WN2B-BX78
- 19. Merchant, A, Fitzpatrick, E, Raban, MZ & Westbrook, JI 2023, 'Is the rounding rule in your dose calculator causing dose errors in children?' *Health Innovation Series*, vol. e-Medication Safety, no. 9. https://doi.org/10.25949/99b1-sk02
- 20. Merchant, A, Fitzpatrick, E, Westbrook, JI & Raban, MZ 2023, 'Default first dose times can cause deadly double doses' Health Innovation Series, vol. e-Medication Safety, no. 15. https://doi.org/10.25949/H47E-TH56
- Merchant, A, Westbrook, JI, Fitzpatrick, E & Raban, MZ 2023, 'Can't find a medication in the electronic medication system? How to prevent errors and user frustration' *Health Innovation Series*, vol. e-Medication safety, no. 8. https://doi. org/10.25949/m2h3-1w46
- 22. Raban, MZ, Merchant, A, Fitzpatrick, E & Magrabi, F
 2023, Recommendations for terminology, abbreviations
 and symbols used in medicines documentation: a rapid
 literature review. Australian Commission on Safety and
 Quality in Health Care, Sydney. https://www.safetyandquality.
 gov.au/publications-and-resources/resource-library/
 recommendations-terminology-abbreviations-and-symbolsused-medicines-documentation-rapid-literature-review
- 23. Seil, E, Song, R, Rana, R, Norman, A, Newson, A, Parkinson, B, Jeet, V & Cutler, H 2023, Newborn bloodspot screening for X-linked adrenoleukodystrophy. Australian Government Department of Health and Aged Care. http://www.msac.gov.au/internet/msac/publishing.nsf/Content/1710-public
- 24. Spanos, S, Leask, E, Patel, R & Braithwaite, J 2023, *Medical leaders for current and future health care*. Australian Institute of Health Innovation, Macquarie University, North Ryde, NSW.
- Woods, A, Merchant, A, Raban, MZ, Fitzpatrick, E, Gamboa, S & Westbrook, JI 2023, 'Keeping staff safe when handling hazardous medication: it's not only cytotoxics that are risky' Health Innovation Series, vol. e-Medication Safety, no. 11. https://doi.org/10.25949/8RFE-PS46
- Yu, D, Stathis, S, Lu, CY, Yang, M & Gu, Y 2023, An overview of Australian healthcare system and regulatory frameworks in the biomedical industry. Macquarie University, North Ryde, NSW.



AIHI grants awarded or under management in 2023

NHMRC and MRFF Grants

PROJECT TITLE	SCHEME	INVESTIGATORS	TOTAL FUNDING
NHMRC Partnership Centre in Health Systems Sustainability (Partners: BUPA, NSW Health, WA Health)	NHMRC Partnership Centre Grant	Braithwaite J Coiera E Westbrook J Glasziou P Karnon J Scott A Buchbinder R	\$8,750,000
Working together: innovation to improve Emergency Department (ED) performance, and patient outcomes and experience for five complex consumer cohorts	Medical Research Future Fund	Clay-Williams R Braithwaite J Harrison R Zurynski Y Hibbert P Mitchell R Cutler H Vukasovic M Ali R Holt L	\$2,836,551
Delivering safe and effective medication management technology now and for the future	NHMRC Investigator Grant	Westbrook J	\$2,500,000
Centre of Research Excellence in Digital Health	NHMRC Centres of Research Excellence	Coiera E Glasziou P Runciman W Hansen D Liaw S Magrabi F Sintchenko V Verspoor K Gallego Luxan B Lau A	\$2,498,649
Centre of Research Excellence in Implementation Science in Oncology (CRE-ISO)	NHMRC Centres of Research Excellence	Braithwaite J Ward R Currow D Delaney G Kefford R Olver I Karnon J Liauw W Westbrook J	\$2,495,783

PROJECT TITLE	SCHEME	INVESTIGATORS	TOTAL FUNDING
Improving the health system's response	NHMRC	Hibbert P	\$2,116,179
when patients are harmed: a mixed-methods	Partnership	Braithwaite J	
study (Partners: CEC NSW, CE Qld, Safer Care	Projects	Westbrook J	
Victoria, ACT Health, ACSQHC)		Magrabi F	
		Mumford V	
		Clay-Williams R	
		Salmon P	
		Middleton S	
		Roberts CM	
Embedding genomics in primary care:	Medical Research	Braithwaite J	\$1,974,063
Using implementation science to design a	Future Fund	Long J	
robust national approach		Best S	
• •		Willcock S	
		Archibald AD	
		Cutler H	
		Ferrie M	
		Dive L	
		Freeman L	
		Trainer A	
Smarter hospitals: Unlocking the promise of	NHMRC	Harrison R	\$1,876,987
virtual models of care through infrastructure	Partnership	Clay-Williams R	
innovation in Australian healthcare facilities	Projects	Braithwaite J	
(Partners: Health Infrastructure, Western		Westbrook J	
Health, Northern Health, Western NSW LHD,		Taylor N	
South Western Sydney LHD, Townsville		Manias E	
Cancer Centre		Mitchell R	
		Lawton R	
A dashboard of predictive analytics and	NHMRC	Westbrook J	\$1,836,150
decision support to drive care quality and	Partnership	Georgiou A	
person-centred outcomes in aged care	Projects	Lord S	
(Partners: Anglicare, Sydney North PHN,	-	Gray L	
Deeble Institute for Health Policy Research,		Day R	
Northern Sydney LHD, Aged Care Quality and		Ratcliffe J	
Safety Agency		Baysari M	
		Braithwaite J	

PROJECT TITLE	SCHEME	INVESTIGATORS	TOTAL FUNDING
A National Aged Care Medication Roundtable - Translating aged care data into action to improve quality of care through collaboration and co-design (Partners: BaptistCare, Scalabrini, Anglicare, Australian Commission on Safety and Quality in Health Care)	NHMRC Partnership Projects	Westbrook J Gray L Bucknall T Etherton-Beer C Newell B Raban M Caughey G Beattie E Makeham M Braithwaite J	\$1,769,499
Bringing artificial intelligence into the real world of healthcare – the implementation challenge	NHMRC Investigator Grant	Coiera E	\$1,500,000
Leveraging informatics to optimise pharmacist-led medication reviews in residential aged care to improve outcomes and cost-effectiveness: a pragmatic cluster randomised controlled trial	Medical Research Future Fund	Raban M Seaman K Cutler H Wabe N Westbrook J Saunders R Silva S Canale A Nguyen A Urwin R	\$1,479,329
Establishing a digital health foundation for outcomes-based diagnostic excellence, safety and value (Partners: Abbott Diagnostics, South Eastern Sydney Local Health District, NSW Health Pathology, Australian Commission on Safety and Quality in Health Care	NHMRC Partnership Projects	Georgiou A Center J Westbrook J Rawlinson W Curtis K Post J Horvath A Hillman K Amin J Endre Z	\$1,377,501
Designing and implementing a real-world learning healthcare system: operational knowledge, data and practice for clinical microsystems of the 21st Century	NHMRC Investigator Grant	Braithwaite J	\$1,350,000
Creating a culture of safety and respect: A controlled, mixed methods study of the effectiveness of a behavioural accountability intervention to reduce unprofessional behaviours (Partners: St Vincent's Health Australia Ltd)	NHMRC Partnership Projects	Westbrook J Braithwaite J Day R Middleton S Scott D Rapport F Mitchell R Baysari M Li L Taylor N	\$1,225,978

PROJECT TITLE	SCHEME	INVESTIGATORS	TOTAL FUNDING
Transforming residential aged care through evidence-based informatics (Partners: BESTMED, Aged Care Industry Information Technology Council, Aged Care Quality and Safety Commission, Consumers Health Forum, Southern Cross Care, Bupa Aged Care)	Medical Research Future Fund	Westbrook J Raban M Manias E Cameron I Coiera E Bucknall T Etherton-Beer C Seaman K Zwar N Braithwaite J	\$1,052,386
Using AI to create smarter, personalised, and scalable interventions for psychological distress	NHMRC Synergy Grant	Christensen H Venkatesh S Cutler H Newby J Gupta S Whitton A Mitchell B O'Dea B	\$1,000,000
The Australian Consortium for Aged Care – Quality Measurement Toolbox (ACAC-QMET): Improving Quality of Care through Better Measurement and Evaluation	Medical Research Future Fund	Inacio M Gray L Westbrook J Caughey G Braithwaite J Hibbert P Comans T Crotty M Wesselingh S Sluggett J	\$655,400
Building a culture of safety in Australian residential aged care facilities	NHMRC Investigator Grant	Churruca K	\$650,740
Enhancing safety and care quality for culturally and linguistically diverse cancer consumers: A consumer engagement approach	NHMRC Ideas Grant	Harrison R Walton M Manias E Wilson C Seale H Girgis A Smith A Chin M	\$292,179
Developing a Comprehensive Care Pathway for those at Risk of Suicide but Not in Care: The Under the Radar Project	Medical Research Future Fund	Christensen H Harvey S Carter G Venkatesh S Boydell K Cutler H Kneebone I Newton-John T Han J Huckvale K	\$275,000

PROJECT TITLE	SCHEME	INVESTIGATORS	TOTAL FUNDING
P-OMICs-flow: Integrating precision oncology into clinical programs	Medical Research Future Fund	Taylor N Thomas D Tucker K Mallinger M Zaheed M Lin F Goldstein D Morrow A Leaney K Gough M Parkinson B Butow P Young J Middleton S Jeet V	\$266,033
Giving patients an EPIC-START: An evidence based, data driven model of care to improve patient care and efficiency in emergency departments	Medical Research Future Fund	Curtis K Dinh M Shetty A Fry M Shaw T Lung T Murphy M Li L Alkhouri H Considine J	\$263,998
Targeted, Adaptive Genomics for ethical, evidence-based expansion of newborn screening: a type II hyrbid effectiveness-implementation trial	Medical Research Future Fund	Taylor N Ungerer J Bauer D Parkinson B Jeet V Mazariego C Watts G Pang J Downie L Bennett G	\$262,221
SENSECog aged care: Hearing and vision support to improve quality of life for people living with dementia in residential aged care	Medical Research Future Fund	Dawes P Westbrook J Martins R Martini A Keay L Leroi I Browning C Heine C Sohrabi H Gu Y	\$230,080

PROJECT TITLE	SCHEME	INVESTIGATORS	TOTAL FUNDING
Understanding intergenerational change in the health and well-being of older adults and its effects: The Sydney Memory and Ageing Study 2.	NHMRC Clinical Trial Centre	Brodaty H Sachdev P Masters C Singh M Dobson A Schutte A Cutler H Brayne C Kochan N Numbers K	\$200,000
Introducing Mitochondrial Donation into Australia: The mitoHOPE (Healthy Outcomes Pilot and Evaluation) Program	Medical Research Future Fund	Carroll J Herbert M Chrsitodoulou J Thorburn D Mills C Zander-Fox D Robker R Rombatus L Sallevelt S Long J	\$189,332
NINA: National Infrastructure for federated learNing in DigitAl health	Medical Research Future Fund	Sullivan C Thomas R de Jersey S Hocking J Luhovy M Jesuadian S Zhou R Turner M Lawley M Coiera E	\$179,089
Building on newborn hearing screening success: towards national standards and data management	NHMRC Targeted Call for Research	Sung V Beswick R Kelvin K Wake M Leigh G Ching T Kluk K Parkinson B King A Shepherd D	\$156,199
Centre of Research Excellence in Depression Treatment Precision (CORE-DEP)	NHMRC Centres of Research Excellence	Newby J Gupta S Whitton A Christensen H Ventakesh S Werner-Seidler A Mitchell B Cutler H Mouzakis K Birrell L	\$150,000

PROJECT TITLE	SCHEME	INVESTIGATORS	TOTAL FUNDING
Integrated Multimodal Precision Liquid biopsy to Enhance MElanoma and NSCLC Treatment (IMPLEMENT)	Medical Research Future Fund	Rizos H Gray E Lee J Long G Millard M Ellis L Coiera E Kao S	\$126,466
Optimising treatments in mental health using AI	Medical Research Future Fund	Christensen H Kummerfield S Kaplan W Venkatesh S Mouzakis K Vasa R Gupta S Rana S Tran T Quinn T Cutler H Knight R Laverty M	\$120,000
Centre of Research Excellence in Interactive Digital Technology to Transform Australia's Chronic Disease Outcomes	NHMRC Centres of Research Excellence	Oldenburg B Maddison R Kostakos V Boyle D Borland R Lau A Furler J Scuffham P Abraham C Taylor C	\$115,000
The impact of COVID-19 and associated health policies on care quality and health outcomes in Australian residential aged care facilities	NHMRC Postgraduate Scholarship	Meulenbroeks I	\$101,542
Delivering precision diagnosis to patients with mitochondrial disease: Using digital technologies to enhance the delivery pathway to provide an accurate genetic diagnosis for patients with mitochondrial disease	NHMRC Partnership Projects	Sue C Kummerfeld S Barlow-Stewart K Schofield D Coiera E Berkovsky S Davis R	\$99,386

PROJECT TITLE	SCHEME	INVESTIGATORS	TOTAL FUNDING
When sporadic disease is not sporadic - exploiting cryptic relatedness to unravel MND genetics	NHMRC Ideas Grant	Williams K Henden L Berkovsky S Blair I Iacoangeli A Smith B Dobson-Stone C Kwok J Halliday G Nicholson G	\$97,500
A comparative effectiveness trial of digital mental health care models for adults with epilepsy	Medical Research Future Fund	Gandy M Dear B Titov N Kwan P Parratt K Payner G Karin E Cutler H Winton-Brown T Coleman H Jones M Nikpour A Todd L	\$85,000
Home hearing and vision care to improve quality of life for people with dementia and carers	Medical Research Future Fund	Dawes P Pachana N Leroi I Keay L Sohrabi H Gu Y Martini A Coleman M Meyer C Heine C Kumaran S Newall J Gannon B Lenzen S Lowthian J	\$85,000
BUBs Quit Study: clinical Midwife Specialist to assist pregnant women to quit smoking using counselling and embedded technology	NHMRC Partnership Projects	Richmond R Lingam R Henry A Kumar S Catling C Hartz D Thornton L Flenady V Dobbins T Sinha K Cutler H	\$83,609

PROJECT TITLE	SCHEME	INVESTIGATORS	TOTAL FUNDING
Improving Mental Health and Social	NHMRC	Rapee R	\$59,000
Participation Outcomes in Older Adults	Investigator Grant	Wuthrich V	
with Depression and Anxiety		Draper B	
		Brodaty H	
		Cutler H	
		Low L	
		Georgio A	
		Johnco C	
		Jones M	
Translating Evidence-Based Psychological	NHMRC	Wuthrich V	\$57,000
Interventions for Older Adults with	Investigator Grant	Rapee R	
Depression and Anxiety into Public and		Draper B	
Private Mental Health Settings Using a		Brodaty H	
Stepped Care Framework		Cuijpers P	
		Cutler H	
		Hobbs M	
		Johnco C	
		Jones M	

Total Funding from NHMRC and MRFF Grants

\$42,438,829

Non-NHMRC/MRFF Grants

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
Pharmaceutical Benefits Advisory Committee	Department of Health	Cutler H Hoyle M Parkinson B Jeet V Rana R Seil E Sharma R Norman A Ahumada-Canale A	\$4,244,588
Australian Type 1 Diabetes Clinical Research Network "Improving clinical outcomes in young people with T1D - getting evidence and treatments into practice	Juvenile Diabetes Research Foundation	Jones T Davis E Bloom D Braithwaite J Zurynski Y	\$1,002,532
Enhancing Human Reasoning with Generative AI: Personalized Digital Coach for Effective Feedback	Fujitsu Ltd	Berkovsky S Beheshti A Coiera E Suzuki G Takeuchi S Itani T Kurihara H Nakazato K Honda T Jiang S	\$947,367

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
Medical Services Advisory Committee Evaluations	Department of Health	Hoyle M Parkinson B Cutler H Seil E Norman A Jeet V Ahumada-Canale A Rana R Sharma R Song R	\$864,600
Phase 2 - COVID-19: utilising near real-time electronic general practice data to establish effective care and best-practice policy	Digital Health CRC	Georgiou A Prgomet M Sezgin G Thomas J Hardie R Amin J McLeod A Proposch A Wilson J	\$843,816
APRICA - Accelerated Program of translational Research in Primary liver Cancer	Cancer Institute NSW	George J McCaughan G Reddel R Chant K Clarke S Liauw W Nagrial A Agar M Zekry A Zurynski Y	\$800,000
Co-designing quality end of life care to culturally and linguistically diverse consumers in cancer services	Cancer Institute NSW	Harrison R	\$599,755
Hide and seek with hereditary cancer: Improving detection of colorectal cancer patients with a high risk of Lynch syndrome	Cancer Council NSW	Taylor N Tucker K Macrae F Gill A Canfell K Pachter N Parkinson B Solomon M Shaw T Kench J	\$579,140
Luminesce Alliance Implementation and Economic Evaluation Platform providing enhanced access to child health services evaluation – PEACH-E	Sydney Children's Hospital Network	Cutler H Rana R	\$362,614

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
MQ DVC(R) Co-funding: Building a culture of safety in Australian residential aged care facilities	Macquarie University	Churruca K	\$351,969
MQ DVC(R) Co-funding: Embedding genomics in primary care: Using implementation science to design a robust national approach	Macquarie University	Braithwaite J Long J Best S Willcock S Archibald A Cutler H Ferrie M Dive L Freeman L Trainer A	\$350,599
Socioeconomic disadvantage, COVID symptom persistence and health-related quality of life EQ-5D: An analysis for India	EuroQol	Sinha K Gutacker N Gu Y Haagsma J	\$342,007
Evaluating the performance of a vision-based food intake logging app	NuviLab Inc	Berkovsky S Ong M	\$333,119
MQ DVC(R) Co-funding: Improving the health system's response when patients are harmed: a mixed-methods study	Macquarie University	Hibbert P Braithwaite J Westbrook J Magrabi F Mumford V Clay-Williams R Salmon P Middleton S Roberts C	\$299,236
EQ-5D with the hearing "bolt-on" items: developing a new quality of life measure for hearing impairment	Cochlear Limited	Gu Y Cutler H Parkinson B Sinha K Dawes P Sharma R Brinson M Gonzalo F Quadri H	\$299,030
Economic Evaluation	Australian Federal Government Department	Cutler H Fooken J Bilgrami A Norman A Byrant R	\$283,030

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
A novel neuro-cardiac self-regulation therapy to improve autonomic and neural function after SCI: Clinical trials and translation to implementation	NSW Health	Craig A Middleton J Gopinath B Cameron I Davis G Tran Y Krassioukov A Braithwaite J Mitchell R Gustin S	\$273,622
Evaluating Artificial Intelligence (AI) for chest radiograph interpretation in emergency medicine	Digital Health CRC	Magrabi F Coiera E	\$255,120
Longitudinal outcomes of hearing-impaired children: early vs later intervention	National Institutes of Health	Ching T Cupples L Leigh G Dillon H Parkinson B Wong C Sharma R	\$254,478
Economic evaluation of the LifeSpan project launched by the Black Dog Institute	Black Dog Institute	Cutler H Abiona O	\$243,660
MQ DVC(R) Co-funding: Smarter hospitals: Unlocking the promise of virtual models of care through infrastructure innovation in Australian healthcare	Macquarie University	Harrison R Clay-Williams R Braithwaite J Westbrook J Taylor N Manias E Mitchell R Lawton R	\$236,427
Towards new models of integrated primary care for Long COVID and other complex chronic health conditions	Department of Health and Aged Care (Commonwealth)	Clay-Williams R Hibbert P	\$225,600
Development of a novel digital clinical safety climate survey and improvement cycle for use in complex digital health settings	Digital Health CRC	Magrabi F Coiera E Irving V Ling J Blakely B	\$213,886
RuralKids GPS delivering equitable care to children in rural NSW	Sydney Children's Hospital Network	Zurynski Y	\$200,632

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
MQ DVC(R) Co-funding: Transforming residential aged care through evidence-based informatics	Macquarie University	Westbrook J Raban M Manias E Cameron I Coiera E Bucknall T Etherton-Beer C Seaman K Zwar N Braithwaite J	\$198,477
Enhancing Human Reasoning with Generative AI: Personalized Digital Coach for Effective Feedback	Macquarie University	Berkovsky S Beheshti A Coiera E Suzuki G Takeuchi S Itani T Kurihara H Honda T Jiang S Sekiguchi M	\$192,734
Research to measure variation in co-payments for common medicines used to treat mental ill health across Australia	Mental Health Commission of NSW	Cutler H Fooken J Bilgrami A Saba N Gu Y	\$192,046
Safe and responsible AI in health services	Digital Health CRC	Magrabi F Coiera E Win Yee Tan Harrer S McKimm A Potts E	\$191,286
MQ DVC(R) Co-funding: Establishing a digital health foundation for outcomes-based diagnostic excellence, safety and value	Macquarie University	Georgiou A Center J Westbrook J Rawlinson W Curtis K Post J Horvath A Hillman K Amin J Endre Z	\$187,564
Value based care in mental health	National Mental Health Commission	Cutler H Abiona O Bilgrami A Aghdaee M	\$187,357
Communicating to promote engagement in using electronic medical records	Australian Research Council	Manias E Gray K Wickramasinghe N Harrison R	\$174,424

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
ARCHS: Adult Recipients of Cochlear implants: Health and Social long-term outcomes	Cochlear Ltd	Mitchell R Lystad R Boisvert I McMaugh A Moore R	\$174,300
ARCHS: Adult Recipients of Cochlear implants: Health and Social long-term outcomes	Macquarie University	Mitchell R Lystad R Boisvert I McMaugh A Moore A	\$174,300
Investigating the relationship between out-of-pocket costs, healthcare quality, experience and outcomes	Medibank Private Limited	Harrison R Mitchell R Braithwaite J Mumford V Hibbert P Westbrook J	\$173,000
NHMRC Investigator Grant DVC(R) Co-funding	Macquarie University	Coiera E	\$120,000
Data mapping in hospital databases	Evidentli	Berkovsky S Coiera E	\$115,000
Primary care screening tool to detect, prevent and treat health issues for older Australians	lan Potter Foundation	Wuthrich V Johnco C Cutler H Willcock S Jones M	\$100,000
Medibank Private: Work. Reinvented. Project	Medibank Private Limited	Mitchell R Wood R Gu J Lin N Sinha K Wilden R Webster C Garcia P Trau R Lu C Yang M Gu Y Cheng Z	\$100,000
Usability and effectiveness of the NICU/PICU version of the electronic Record for Intensive Care (eRIC)	eHealth NSW	Raban M Westbrook J Wiggins M Harrison R Clay-Williams R	\$98,230

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
Dynamics and inequality in mental health care use and expenditures after income shocks	MQBS and e61 Institute	Bilgrami A Best R Gu Y Bertoni M Tran M Saba N	\$94,517
BCAL Diagnostics	BCAL Diagnostics Ltd	Berkovsky S Asbe N	\$94,263
Cough Sound Assessment Using Deep Learning Techniques	Google Asia Pacific Pty Ltd	Sharan R	\$84,173
Measuring healthcare experiences with diverse populations	NSW Ministry of Health	Harrison R Manias E Mitchell R	\$70,000
Evaluation of Easycare Assisted-Living Technology	Easy Care Technology Pty Ltd	Lau A	\$65,000
AUSMURI: Cohesive and Robust Human-Bot Cybersecurity Teams	Australian Defence Science and Technology	Rubenstein B Kaafar D Berkovsky S Brown S Eidels A Kostakos V Murray T Ohrimenko O	\$64,000
Supporting dynamic multidimensional entrepreneurial resilience in Australia	Australian Research Council	Sinha K Magnani L Chirico F Gu Y Zhu R Green R	\$64,000
Multimodal Precision Liquid Biopsy to Predict Risk of Melanoma Recurrence	U.S. Department of Defense	Rizos H Diefenbach R Coiera E Berkovsky S Long G Scolyer R Gray E Millard M	\$62,209
Ethical Artificial Intelligence (AI) in healthcare: frameworks and facilitators	Digital Health CRC	Magrabi F Lyell D	\$60,000
An overview of Australian Healthcare System and Regulatory Frameworks in the Biomedical Industry	Institute for Information Industry	Yang M Gu Y Yu D Stathis S Lu C	\$58,640
Novel Informatics Approach for Automated Reporting of Aged Care Quality Measures: Towards A Unified Intelligent System	Macquarie University	Wabe N	\$49,988

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
Mitochondrial Disease Triage Tool	Kolling Institute	Berkovsky S	\$49,409
Survey on Safety Culture for Southern Adelaide Local Health Network	Southern Adelaide Local Health Network	Ellis L Hibbert P Falkland E Clark R Schultz T	\$49,230
Optimising eHealth systems to improve medication safety and patient outcomes	Macquarie University	Raban M	\$48,858
Development of Audit Tools based on the Optimal Care Pathways for Multiple Myeloma and Chronic Lymphocytic Leukemia	Janssen-Cilag Pty Ltd	Chauhan A Harrison R Mitchell R Arnolda G Hibbert P Braithwaite J	\$46,500
Environmental scan of acute care safety and quality measurement frameworks.	Australian Commission on Safety and Quality in Health Care	Clay-Williams R Long J Cheek C Ellis L Austin E Richardson L	\$44,717
Safety assessment of an AI-based clinical decision support system	Healthdirect	Magrabi F	\$41,313
Patient Preferences for Knee Replacement Surgery in Australia	Johnson & Johnson Medical Pty Ltd	Gu Y Cutler H Mutowo M	\$40,000
Primary Health Care Patient Safety Measurement	Australian Commission on Safety and Quality in Health Care	Ellis L Clay-Williams R Georgiou A Foo D Fisher G Saba M	\$39,134
Supporting materials for patient safety culture measurement: Parts A and B	Australian Commission on Safety and Quality in Health Care	Ellis L Tran Y Pomare C	\$35,800
Rapid review of the literature on paediatric end-of-life care	Australian Commission on Safety and Quality in Health Care	Lystad R Mitchell R Harrison R Arnolda G Cheek C Chauhan A Mears S Wijekulasuriya S Chitkara U	\$35,498
Predicting Freezing of Gait in Parkinson's Disease Using Brainwaves	University of Sydney	Berkovsky S Sharan R	\$35,000

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
Co-creating safe spaces: Translational research on innovative alternatives to the emergency department for people experiencing emotional distress and/or suicidal crisis	Suicide Prevention Australia Ltd	Ellis L	\$27,623
Calvery Health Consultation	Research Australia	Zurynski Y Smith C	\$23,456
Clinician Experience of Care for the Southern NSW Virtual Rural Generalist Service (VRGS)	Health System Support Group	Harrison R	\$19,490
Research plan for the validity and reliability testing of two patient safety culture surveys	Australian Commission on Safety and Quality in Health Care	Tran Y Ellis L	\$16,495
Early childhood education and care pay and conditions research	ACT Education Directorate	Degotardi S Cumming T Brand N Thornwaite L Mitchell R Sinha K Gu J Gu Y	\$15,000
Cost effectiveness of Cochlear implants in Finland	Cochlear Limited	Cutler H	\$15,000
Strategies to address unprofessional behaviours among staff in acute healthcare settings: a realist review	National Institute for Health Research	Maben J Mannion R Jones A Westbrook J Pearson M Abrams R	\$11,120
An evaluation of full scope of practice physiotherapy-led assessment and management of paediatric orthopaedic variants	Department of Health QLD	Pendlebury E Thompson B Schultz C George J Fulton T Van Der Werff J Fooken J	\$9,000
Value based care in mental health	National Mental Health Commission	Cutler H Rapport F Abiona O Bilgrami A Aghdaee M	\$7,285

PROJECT TITLE	FUNDING BODY	INVESTIGATORS	TOTAL FUNDING
Clinical Safety Management System (CSMS)	Australian Digital Health Agency	Magrabi F	\$6,916
Language Inclusion: Supporting people with intellectual disability and their carers from culturally and linguistically diverse backgrounds	NSW Council for Intellectual Disability	Chik A Orlando M Castle C Gu Y Ollerhead S Gorfinkel L Burridge A	\$5,411
Automation in nursing decision support systems: evaluating effects on risk identification and decision making	Macquarie University	Akbar S	\$5,000
MQ ECR of the Year Award - STEMM	Macquarie University	Liu S	\$5,000
MQ ECR Enabling Scheme	Macquarie University	Austin E	\$3,000
MQ ECR Enabling Scheme	Macquarie University	Spanos S	\$3,000
MQ ECR Enabling Scheme	Macquarie University	Prgomet M	\$3,000
Validation of a foundational model of the Emergency Department system	Macquarie University	Austin E	\$3,000
MQ ECR Enabling Scheme	Macquarie University	Rana P	\$1,000

Total Funding from Non-NHMRC/MRFF Grants

\$18,197,590

\$60.6M

Total enterprise value of grants under AIHI management during 2023





Glossary

FREQUENTLY USED TERMS

ACSOHC Australian Commission on Safety and Quality in Health Care

AI Artificial intelligence

AIHI Australian Institute of Health Innovation

CALD Culturally and linguistically diverse

CHI Centre for Health Informatics, AIHI

CHRIS Centre for Healthcare Resilience and Implementation Science, AIHI

CHSSR Centre for Health Systems and Safety Research, AIHI

DHCRC Digital Health Cooperative Research Centre

DoHAC Commonwealth Department of Health and Aged Care

ED Emergency department

EHR Electronic health records

EU European Union

IHACPA Independent Health and Aged Care Pricing Authority

ISQua International Society for Quality in Health Care

JAMIA Journal of the American Medical Informatics Association

MD Medical Doctor

MedInfo 2023 19th World Congress on Medical and Health Informatics, MedInfo 2023

MPhil Master of Philosophy

MQ Macquarie University

MRes Master of Research

MRFF Medical Research Future Fund

MSAC Medical Services Advisory Committee

MUCHE Macquarie University Centre for the Health Economy, AIHI

NHMRC National Health and Medical Research Council

NSW New South Wales, Australia

OECD Organisation for Economic Co-operation and Development

PBAC Pharmaceutical Benefits Advisory Committee

PBS Pharmaceutical Benefits Scheme

PhD Doctor of Philosophy

RACGP Royal Australian College of General Practitioners

RACP Royal Australasian College of Physicians

WHO World Health Organisation

 $\hbox{PHOTOS: Adobe Stock, Adam Scarf, Chris Stacey, Shutterstock and Jesse Taylor.}$ The Australian Institute of Health Innovation acknowledges the traditional custodians of the country on which we work and live and recognise that their cultures and customs have nurtured and continue to nurture this land. We pay our respects to Elders past, present and emerging.

