



MACQUARIE  
University

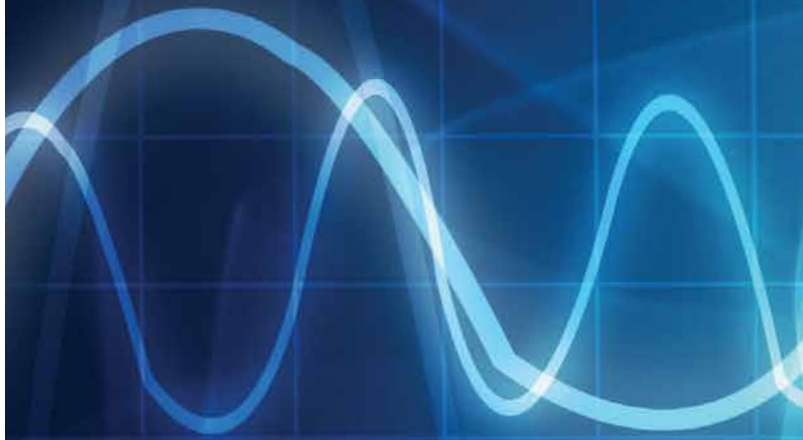
# Australian Institute of Health Innovation

ANNUAL REPORT

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2018

QUESTION







INSPIRE

DISCOVER



# Founding Director's Report



## **A KEY INGREDIENT TO RESEARCH SUCCESS: COLLABORATION**

After more than a decade of doing so, the privilege of leading the Australian Institute of Health Innovation (AIHI) shoulder-to-shoulder with my esteemed colleagues Professor Enrico Coiera and Professor Johanna Westbrook is more apparent to me than ever before. This is the Institute's fourth full year at Macquarie University, having joined on 2nd November 2014, and we have made great gains during this period.

The 2018 calendar year has witnessed us taking further large steps forward in our ongoing quest as a leading national and international store of expertise for research-based solutions to healthcare's problems. We have a deeply held commitment to providing evidence that supports practical and implementable change in the health system, delivering real benefits to people in the community and the health system.

In today's complex and fast-moving world, a key to achieving this is collaboration. The image people have of research, especially in centuries gone by, is that science and social science was accomplished by a sole person thinking great thoughts or running the decisive experiment. It is not clear if it ever really worked like this, but it certainly does not in today's world. All our research is done in multi-disciplinary teams with each team member offering different kinds of expertise and disciplinary skills, contributing to the greater whole.

Key collaborative achievements this year include our research on child injury hospitalisations in Australia that helped support the decision by the Federal Government to make a funding commitment to a national injury prevention strategy.

In our landmark CareTrack studies documenting how much care provided is in line with level 1 evidence or consensus-based guidelines, a third endeavour, CareTrack Aged, will provide benchmarking data on the level of appropriate care provided to people in residential aged care facilities, as well as information on residents' sense of wellbeing. Coming at the time of the Royal Commission into Aged Care Quality and Safety, this work will produce strategically important information for the benefit of all Australians who have a family member who now, or who in the future will need residential aged care.

Our work this year in Artificial Intelligence (AI) created a groundswell of support from industry, academia, peak bodies and consumers to support the establishment of the Australian Alliance for Artificial Intelligence in Healthcare. This plants the seed for future partnerships to research this exciting area. We also made great strides in our research investigating and improving the safety and ethics of digital health interventions. It is a time of new risk and harm in healthcare, as the world becomes more complex.

Meanwhile, in our research into medication safety—concerned with the challenge of medication errors, a major cause of preventable harm—we are not only measuring the effectiveness of ehealth interventions. We are feeding back results in real time to enable the rapid adoption of improvements.

One of our flagship initiatives is the National Health and Medical Research Council-funded Partnership Centre for Health System Sustainability. This initiative is essentially sharing on steroids—bringing together more than 100 systems partners and researchers from many fields and focussing on building a sustainable health system, underpinned by evidence. Topics of interest include the economics and financing of healthcare, using big data and machine learning to analyse health systems performance, and examining waste, harm and the evidentiary basis for practice.

Additionally, we are especially looking at new ways to support Australia's leaders in health systems research, conjoining their expertise with those responsible for the delivery system, to investigate issues of vital interest to patients, policy makers, managers and clinicians.

Another highlight this year has been to work with Research Australia to provide recommendations for accelerating and measuring the impact of medical research on the health system and the

broader society. With the growth of the Medical Research Future Fund (MRFF), this is a pivotal initiative.

At the end of the day our team-based approach to research, and working with stakeholders right across healthcare, will not amount to much unless we can get evidence into practice. Our work with the World Health Organisation, the OECD, Health Ministers around the world and importantly local Australian policy makers and health providers delivering care to patients provides leverage—and the most enjoyable synergistic collaborations.



**Professor Jeffrey Braithwaite**  
FOUNDING DIRECTOR







Macquarie University is ranked among  
the top 1% of universities in the world



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# Who we are

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The **Australian Institute of Health Innovation (AIHI)** is a research-intensive Institute located within the unique campus of MQ Health at Macquarie University. MQ Health is Australia's first fully integrated academic health sciences centre, combining excellence in clinical care with teaching and research.

AIHI has an absolute commitment to improving healthcare services and systems in Australia and beyond. We aim to create world-class, high-impact research that

makes a positive difference for patients, health professionals and society more broadly. We partner wherever we can with those providing or receiving health services in real-life contexts to ensure our research questions are clinically meaningful and the answers, practical and implementable.

The Institute is comprised of three independent but complementary research centres that collaborate extensively to find answers to questions about healthcare performance, value,

safety, quality, automation, translation and sustaining change. We conduct quantitative and qualitative studies using big data, human factors and complexity science in our efforts to understand what works, what doesn't and why. We also devise and develop tools that facilitate evidence gathering, visualisation, analysis prediction and automation.

In 2018, our leadership in translational health services research was confirmed by the establishment of three new centres following a series of successful grant applications in the previous year. The NHMRC Partnership Centre for Health System Sustainability has completed its first year of a five-year research endeavour with support from the NSW Ministry of Health, the Department of Health WA, Bupa Health Foundation and the University of Notre Dame Australia. Two NHMRC Centres of Research Excellence – one in Implementation Science in Oncology and one in Digital Health – have also become a reality.

The total value of research grants and contracts managed by AIHI in 2018 exceeded \$38 million. We also contributed to research associated with a further \$41 million worth of grants administered by other institutions. This has allowed us to employ more than 180 staff and associates, and to support 37 higher degree students whilst maintaining our small team of highly skilled professional staff. The combined effort of our team in 2018 translated into three books, 32 book chapters, 212 peer-reviewed journal articles and numerous conference presentations, posters, media opportunities and outreach events.

**We aim to create world-class, high-impact research that makes a positive difference for patients, health professionals and society more broadly.**

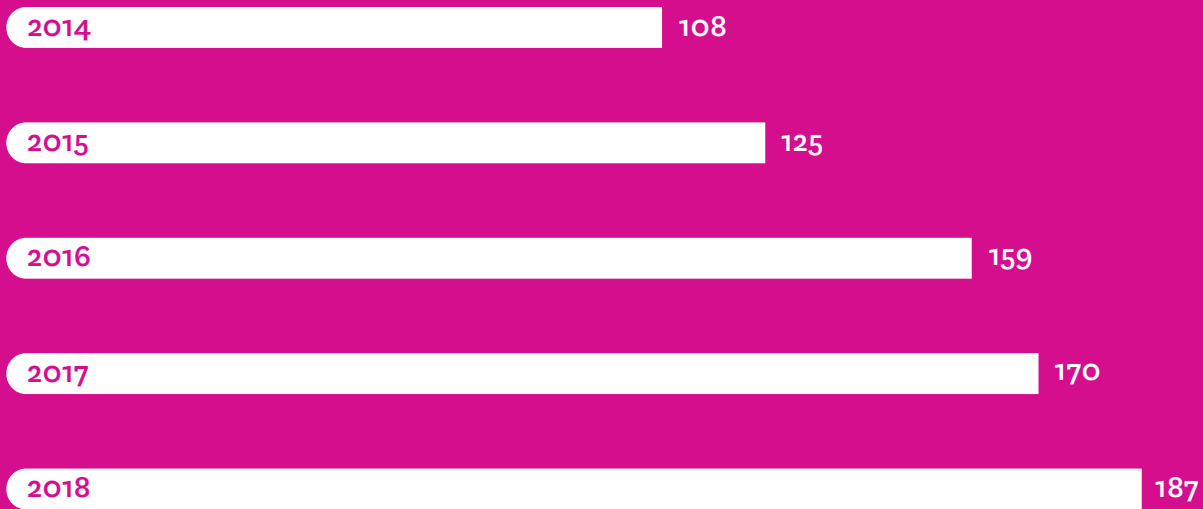






# AIHI at a glance

## GROWTH IN STAFF NUMBERS



## OUR RESEARCH IMPACTS ON



Patient safety and high value care



Sustainability of the health system



Research translation



Behaviour change, multidisciplinary teamwork and workplace culture



Digital health development and implementation



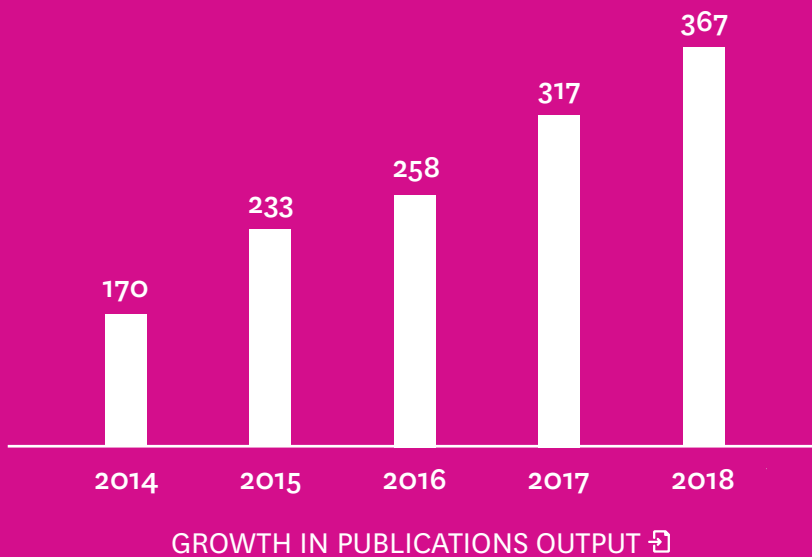
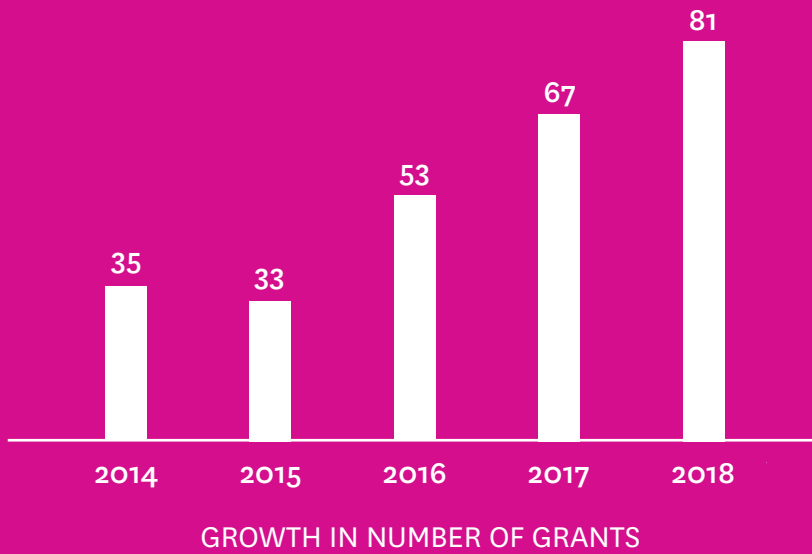
Integration of care



International health system reform



Quality management processes and systems improvement



**\$8.5 million**

New research funding for 2018

**26**

Total new projects commenced in 2018

**\$38 million**

Enterprise value of projects under AIHI management

**81**

Number of research projects under AIHI management

**\$41 million**

Enterprise value of grants administered elsewhere involving AIHI

**12**

Number of projects administered elsewhere involving AIHI

**1**

Commercialisation

**187**

Researchers, visiting appointees and professional staff

**37**

PhD, Master of Research and Master of Philosophy students

**367**

Peer-reviewed outputs

**40**

Outreach events



# Our Board



**CHAIR**  
Professor  
Patrick McNeil



**MACQUARIE UNIVERSITY**  
Professor  
Jeffrey Braithwaite



**MACQUARIE UNIVERSITY**  
Professor  
Enrico Coiera



**MACQUARIE UNIVERSITY**  
Professor  
Lesley Hughes



**MACQUARIE UNIVERSITY**  
Professor  
Johanna Westbrook



**MACQUARIE UNIVERSITY**  
Professor  
Cliff Hughes AO



**NSW HEALTH SYSTEM**  
Professor  
Patrick Bolton



**NSW HEALTH SYSTEM**  
Professor  
Chris Cowell



**NSW HEALTH SYSTEM**  
Professor  
Adam Jaffé



**NSW HEALTH SYSTEM**  
Ms Carrie Marr



**NSW HEALTH SYSTEM**  
Professor  
Sally Redman AO



**NSW HEALTH SYSTEM**  
Professor  
George Rubin



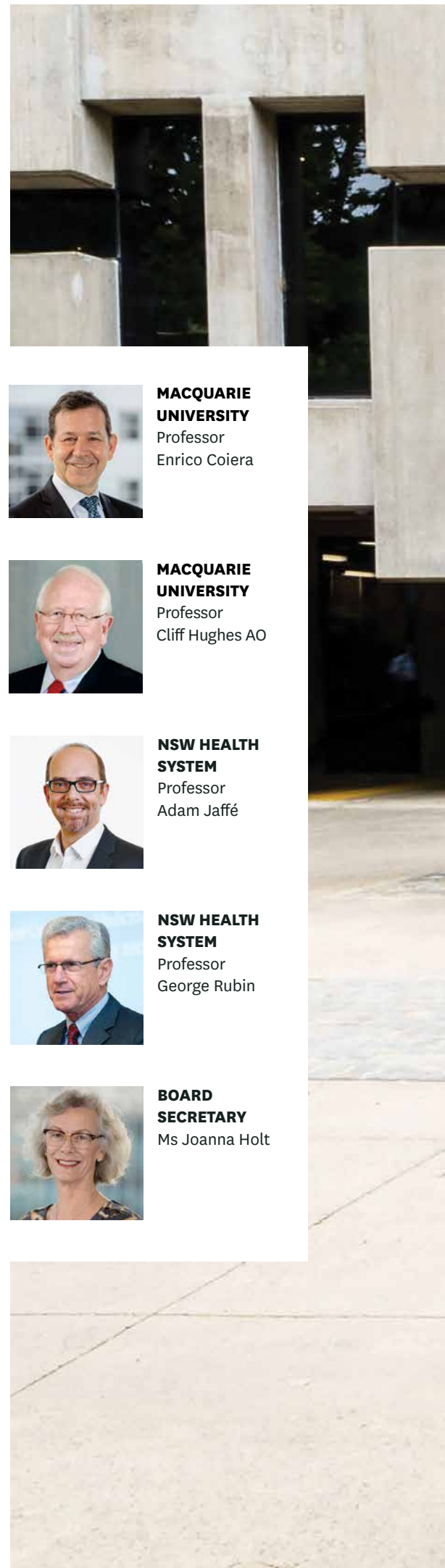
**INDEPENDENT MEMBERS**  
Professor  
Les White AM



**INDEPENDENT MEMBERS**  
Dr Karen Owen



**BOARD SECRETARY**  
Ms Joanna Holt






NO WALK  
NO WALK

WINDMILL



# Our Directors

**PROFESSOR JEFFREY BRAITHWAITE**   
**FOUNDING DIRECTOR, AUSTRALIAN INSTITUTE OF HEALTH INNOVATION**  
**DIRECTOR, CENTRE FOR HEALTHCARE RESILIENCE AND IMPLEMENTATION SCIENCE**

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 has particular expertise in 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 the international context and the restructuring of health services. Professor Braithwaite is well known for bringing management and leadership concepts and evidence into the clinical arena and he has published extensively, with over 470 refereed contributions. He has presented at or chaired international and national conferences, workshops, symposia and meetings on more than 914 occasions, including 97 keynote addresses. He is the recipient of 46 awards, including the prestigious Health Services Research Award by Research Australia in 2015 and multiple Editor's Choice awards for papers published in the *International Journal for Quality in Health Care*.

Theories and ideas Professor Braithwaite has helped shape, formulate or devise, and provided research findings for, are now in common use as a result of his work: 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, inter-professional learning and culture change rather than restructuring 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 relationships between efficiencies and structural type of teaching hospitals, the behavioural displays of clinicians in service structures and the status of system-wide patient safety improvement initiatives.

Professor Braithwaite has received career research funding of over \$131 million spread over 82 grants; total new research funding and grants in the last five years amounts to over \$83 million. More than \$75.2 million of this is Category 1, peer-reviewed, chiefly Australian Research Council and National Health and Medical Research Council funding. He referees for 31 journals and the health research bodies of Ireland, New Zealand, Switzerland and the United Kingdom as well as for many international conferences and symposia. He publishes in the leading journals in three convergent fields and thus expresses his work at a unique intersection of organisational studies, health services research and clinical care.

**PROFESSOR JOHANNA WESTBROOK**   
**DIRECTOR, CENTRE FOR HEALTH SYSTEMS AND SAFETY RESEARCH**

Professor Johanna Westbrook is internationally recognised for her research evaluating the effects of information and communication technology (ICT) in healthcare. She has over 390 publications and been awarded more than \$40 million in research grants. Professor Westbrook has

led important research in the development and application of approaches to evaluate ICT, including new tools and methods which have been adopted internationally. She has contributed to theoretical models regarding the design of complex multi-method ICT evaluations. Her research has led to significant advances in our understanding of how clinical information systems deliver (or fail to deliver) expected benefits and has supported translation of this evidence into policy, practice, and IT system changes. Professor Westbrook is currently leading research investigating the role and impact of ICT in the community and aged care sector.

Professor Westbrook was elected as a Fellow of the American College of Medical Informatics in 2005 – one of only three Australians to receive this honour. In 2014, Professor Westbrook was named Australian ICT professional of the year by the Australian Information Industry Association for her research contributions. In 2015 she was appointed Associate Editor of the Journal of







the American Medical Informatics Association. In 2016 she was appointed to the Board of the Australian Digital Health Agency and in 2018 was made a Fellow of the Australian Academy of Technology and Engineering.

**PROFESSOR ENRICO COIERA**   
**DIRECTOR, CENTRE FOR  
HEALTH INFORMATICS**

Trained in medicine with a computer science PhD in Artificial Intelligence (AI), Professor Enrico Coiera is Foundation Professor in Medical Informatics at Macquarie University and Director of the Centre for Health Informatics, a group he co-founded in 2000. He is also Director of the NHMRC Centre of Research Excellence in Digital Health.

With a research background in industry and academia, Professor Coiera has a strong international reputation for his work on decision support and communication processes in biomedicine.

Professor Coiera spent ten years at the prestigious Hewlett-Packard Research

## **We conduct world-class research to catalyse performance improvement in healthcare services and systems in Australia and internationally.**

Laboratories in Bristol UK where he led numerous health technology projects. He has overseen the development and trial of multiple e-Health interventions, including the Healthy.me consumer app and clinical decision support systems.

The third edition of his textbook *Guide to Health Informatics* is widely used internationally and is translated into several languages.

He has over 270 publications, over 11,000 citations in Google Scholar with an H-index of 51 (Google Scholar). Of these publications, 27 have more than 100 citations, 8 more than 300 citations and one has more than 1,500 citations.

# Real world impact

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## RESEARCH LEADS TO NATIONAL STRATEGY FOR KIDS' INJURY PREVENTION

In the 2018 Federal Budget, the government committed \$900,000 to the establishment of a national childhood injury prevention plan, driven by research findings from AIHI.

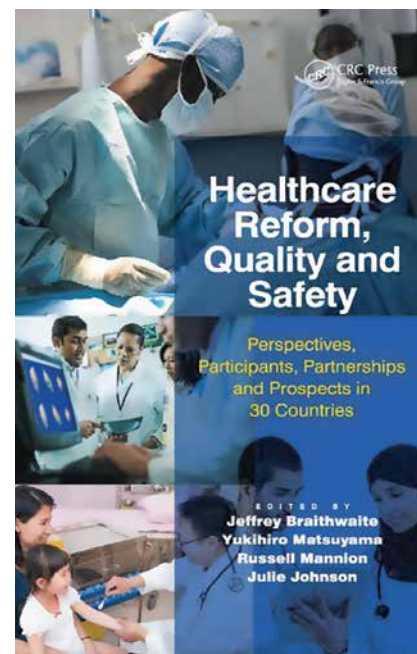
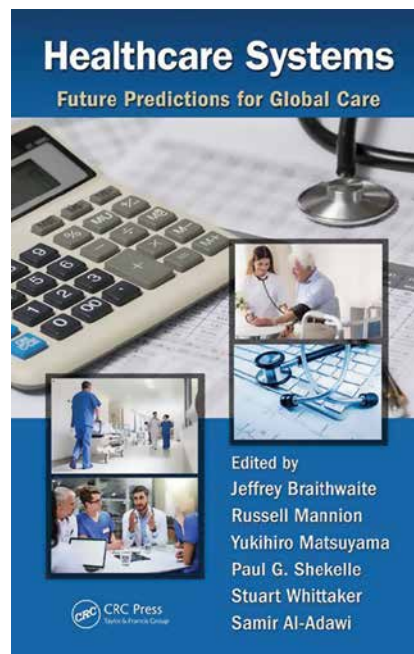
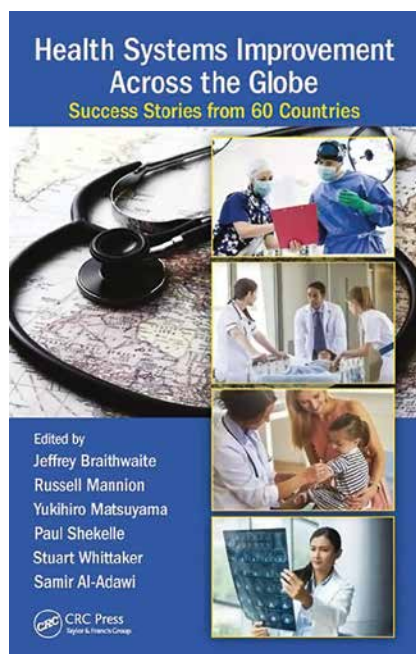
In the largest study of intentional child injury hospitalisations and their health outcomes in Australia, researchers found that for the period 1 July 2001 to 30 June 2012, there were 18,223 self-harm hospitalisations of children aged 6 to 16 years.

Australia has not had a national injury prevention plan since 2014 and the initiative to fund a new national strategy was welcomed by researchers, clinicians and trauma specialists.

The research was led by **Associate Professor Rebecca Mitchell** [↗](#) who has a strong history of conducting research that has informed public health policy and health service practice.

Results of this important study attracted widespread interest and resulted in opportunities for Associate Professor Mitchell to speak to government, media and interested bodies such as Women's & Children's Healthcare Australasia.

- **Mitchell RJ, Curtis K, Foster K**  
A 10-year review of child injury hospitalisations, health outcomes and treatments costs in Australia. *Injury Prevention* 2018 344-350
- **Mitchell R, Seah R, Ting HP, Curtis K, Foster K**. Intentional self-harm and assault hospitalisations and treatment cost of children and adolescents in Australia during a 10-year period. *Australian and New Zealand Journal of Public Health*. 2018; 42(3):240-6.



## Professor Braithwaite is internationally recognised for his research in health services and systems, which includes work on comparative international health reform

### GUIDING HEALTH SYSTEM REFORM WORLDWIDE

More than 150 countries as varied as Sierra Leone, Japan, Denmark and Afghanistan were invited to share examples of successful healthcare system interventions, policies or new service delivery models in a series of books edited by Professor Jeffrey Braithwaite, Founding Director of AIHI.


This collaborative approach to exploring success stories is part of a wider strategy for health system reform that points toward learning from what goes right in healthcare—a perspective known as Safety-II. Instead of looking only at what goes wrong in health systems and putting in place preventative strategies, Safety-II looks at what health systems are doing well, in what context, and how these strategies can be used elsewhere.

Professor Braithwaite has co-edited two series of books related to international healthcare reforms. The first details international efforts to understand and apply the principles of resilient healthcare. The second series investigates health system reform initiatives in widely diverse countries. The outcomes have been presented at conferences worldwide and have been used to inform future policy directions. 📖

- **Braithwaite J**, Mannion R, Matsuyama Y, Shekelle P, Whittaker S and Al-Adawi S (eds) (2018) *Healthcare Systems: Future Predictions for Global Care*. Boca Raton, Florida, CRC Press: Taylor & Francis Group. ISBN: 978-1138052604
- **Braithwaite J**, Mannion R, Matsuyama Y, Shekelle P, Whittaker S and Al-Adawi S (eds) (2017) *Health Systems Improvement Across the Globe: Success Stories from 60 Countries*. Boca Raton, Florida, Taylor & Francis. ISBN: 978-1472482044
- **Braithwaite J**, Matsuyama Y, Mannion R and Johnson J (eds) (2015) *Healthcare Reform, Quality and Safety: Perspectives, Participants, Partnerships and Prospects in 30 Countries*. Farnham, Surrey, Ashgate Publishing Ltd. ISBN: 978-1-472451408



### **SPEEDING UP SYSTEMATIC REVIEWS TO CATCH DRUG SAFETY ISSUES EARLIER**

In 2018, researchers from AIHI established **trial2rev** , a new web-based platform used to signal when systematic reviews should be updated. The long-term goal of the research is to reduce the time it takes to catch safety issues in drugs that have been approved for use.

Associate Professor Adam Dunn and partners from Boston Children's Hospital and Harvard Medical School have a long-term collaboration investigating the nature of biases affecting systematic reviews and the potential for risks associated with conflicts of interest.

Systematic reviews are critical tools in regulatory science; they are used to make changes to policy and practice in medicine, especially when safety issues are discovered in drugs that have already been approved for use. Up to a third of new drugs are found to have safety issues and half of those are only discovered more than four years after approval.

Shifting from simply finding new ways to measure biases and waste in systematic reviews, Associate Professor Dunn and the team have started to develop solutions. The web-based platform **trial2rev** serves as a large database linking the registrations of clinical trials to the systematic reviews that include them.

The National Library of Medicine awarded the team US\$1 million over four years to help make better use of clinical trial results data from ClinicalTrials.gov, with the goal of catching drug safety issues in approved drugs more quickly.

- **Martin P, Surian D, Bashir R, Bourgeois FT, Dunn AG.** Trial2rev: Combining machine learning and crowd-sourcing to create a shared space for updating systematic reviews. *JAMIA Open*, Volume 2, Issue 1, April 2019 Pages 15-22
- **Surian D, Dunn AG, Orenstein L, Bashir R, Coiera E, Bourgeois FT** A shared latent space matrix factorisation method for recommending new trial evidence for systematic review updates. *Journal of Biomedical Informatics*, 79:32-40



**Systematic reviews are critical tools in regulatory science; they are used to make changes to policy and practice in medicine, especially when safety issues are discovered in drugs that have already been approved for use.**



### MEASURING EXPOSURE TO VACCINE MISINFORMATION ON SOCIAL MEDIA

Health misinformation is a critical threat to global health. In online communities, beliefs and attitudes can cluster and polarise to create pockets of extremism. Not all beliefs that form within the murky depths of the internet are harmful, but some can, and do, manifest as harm.

With collaborators from the University of Sydney and Harvard Medical School, Associate Professor Adam Dunn leads an NHMRC Project to develop new tools for measuring the impact of misinformation on health behaviours.

Vocal critics of vaccination make up a tiny proportion of the population but use guerrilla techniques to ensure that their opinions are heard as widely as possible. To date it has been challenging to examine just how far misinformation spreads and to identify the groups of people who more often engage with misinformation because of the news they consume and the social media communities they inhabit.

Associate Professor Dunn and the team are building tools to address these problems. They apply machine learning and network science methods to massive datasets involving millions of Twitter users and the billions of social connections through which these users share information.

In 2018, the work expanded to analyse the text from webpages shared on social media. Adapting validated checklists used to assess the credibility of health information for patients and health research communications, they used machine learning to create a tool for automatically estimating the credibility of text-based webpages. [↗](#)

The next steps for the team will include translating the methods for identifying communities most susceptible for misinformation into the delivery of precision interventions that can empower members of these communities to challenge the misinformation to which they are exposed.

- **Dunn AG, Mandl KD, Coiera E.** Social media interventions for precision public health: promises and risks. *npj Digital Medicine*, 1:47
- **Shah Z, Surian D, Dyda A, Coiera E, Mandl KD, Dunn AG.** Automatically applying a credibility appraisal tool to track vaccination-related communications shared on social media. *arXiv*, arXiv:1903.07219

### TACKLING UNPROFESSIONAL BEHAVIOURS THAT JEOPARDISE PATIENT SAFETY

Unprofessional behaviours are endemic in healthcare. Bullying, discrimination and harassment are just the tip of the iceberg. 'Unprofessional' or 'disruptive' behaviours encompass a wide spectrum and include conduct that more subtly interferes with team functioning. Such behaviours include poor or ambiguous communication, passive aggression, lack of responsiveness, public criticism of colleagues, and humour at others' expense. Although unprofessional behaviours are common, the true prevalence is likely to be significantly underestimated, with widespread under-reporting. Health professionals consistently report that these types of behaviour impact upon the way they do their work and affect the quality and safety of that work. The challenge for health systems is to implement effective interventions to counter these behaviours.

St Vincent's Health Australia (SVHA), comprising 18,400 staff in six public and nine private hospitals and 16 aged care facilities, has developed and is implementing Ethos, an ambitious program which aims to 're-define normal' and tackle the issue of unprofessional behaviours in hospitals. The Ethos program builds on available international evidence that suggests that early intervention, when issues are less serious or entrenched, is preferable to instigating a formal complaints process or disciplinary procedure. The Ethos program comprises a package of capability-building and training measures designed to equip leaders and staff with the skills to recognise, role model and teach safe and professional behaviour; a reporting system which allows anonymous reports which are 'triaged' by trained staff to determine the appropriate response; an escalating accountability pathway; and a peer-driven early intervention process.

SVHA and AIHI were awarded an NHMRC Partnership Project Grant, led by Professor Johanna Westbrook to assess the effectiveness of the Ethos program in reducing the prevalence of



unprofessional behaviour, enhancing the wellbeing and experience of staff, and improving the experience, safety and outcomes of patients. Applying a controlled before-and-after design, solid evidence will be provided as to whether an organisation-wide intervention to tackle unprofessional behaviour is effective – a first for Australia and one of the few such studies internationally.

The first phase of the research has commenced with over 5,000 clinical and non-clinical staff across nine hospitals in three states having completed a detailed baseline survey of the frequency with which they have experienced and witnessed 26 types of unprofessional behaviour. Further hospitals will be surveyed in 2019. Importantly, the study includes hospitals in multiple states and in the private and public sectors and will assess barriers to sustainability and spread of the program, thus providing guidance to the whole sector on how to tackle this issue. With Associate Investigators from the Australian Health Practitioner Regulation Agency, the Royal Australasian College of Surgeons, and the Australian and New Zealand College of Anaesthetists, the project seeks to build a network of organisations jointly committed to changing the culture of the health system. [↗](#)

- **Westbrook J, Sunderland N, Atkinson V, Jones C, Braithwaite J.** Endemic unprofessional behaviour in health care: the mandate for a change in approach. *Medical Journal of Australia* 2018; 209 (9): 380-381
- **Westbrook J, Sunderland N.** Bullying and harassment of health workers endangers patient safety. *The Conversation*, 5 November 2018
- **Sunderland N. Bullying, harassment 'endemic' in Australian health care system** [↗](#). ABC Radio National Health Report interview, 5 November 2018



**FROM THE GRASSROOTS OF AGED CARE: CONSUMER ENGAGEMENT AND NEW INSIGHTS**

Older Australians report quality of life as their central goal for aged care. In the first large scale Australian study of its kind, researchers from the **Aged Care Evaluation and Research (ACER)** team are working in partnership with aged care provider, Uniting and their clients to actively monitor wellbeing and social participation to enhance community-based aged care services.

New evidence about older adults' wellbeing has now been generated through embedding two tools into routine assessments – the Australian Community Participation Questionnaire (ACPQ) and ICEpop CAPability Measure for Older Adults (ICECAP-O). A Commonwealth Department of Health Dementia and Aged Care Services grant facilitated an initial evaluation of the impact of the tools across three different regions in NSW in 2018, covering 1,200 aged care clients. Staff and clients have highlighted the value of these tools in developing staff-client

relationships and importantly, sparking discussions that support care planning. In a world first, we have now translated and begun piloting both tools in Korean, Mandarin and Turkish.

Aged care clients are at the heart of this research. In November 2018, our stakeholder forum was attended by 16 representatives including Uniting clients, staff and managers, as well as the Commonwealth Department of Health and Health Consumers NSW. This event provided a unique opportunity for researchers, older Australians, care staff and policymakers to discuss clients' needs and existing gaps in aged care services, as well as potential strategies to improve wellbeing. Feedback from all attendees was extremely positive, and an aged care client and frontline Uniting staff member have since collaborated on a publication.

Engaging consumers not only in the research being conducted, but also in its design and evaluation, has ensured that our research is relevant, applicable and useful.

- **Siette J, Georgiou A, Jorgensen M, O'Donnell C, Westbrook J** Integrating social engagement instruments into community aged care assessments to enhance service provision. *Journal of Health & Social Care in the Community*; 26(6):810-818
- **Brett L, Georgiou A, Jorgensen M, Siette J, Scott G, Gow E, Lockett G, Westbrook J** Ageing well: evaluation of social participation and quality of life tools to enhance community aged care (study protocol). *BMC Geriatrics* 2019 19(1): 78



# Introducing our centres

The Australian Institute of Health Innovation is powered by three long-standing and complementary Centres dedicated to improving the services and systems that deliver healthcare to patients. Each of these Centres conducts research under a single encompassing theme:

- **Centre for Health Informatics**
- **Centre for Health Systems and Safety Research**
- **Centre for Healthcare Resilience and Implementation Science**

Reflective of the complex nature of healthcare delivery, the Centres also contribute their collective expertise to explore the big questions of safety, quality, technology and sustainability that trouble health systems nationally and internationally.

The **NHMRC Partnership Centre for Health System Sustainability** is one example of the effectiveness of this collaborative approach. The Partnership Centre has provided a magnet for inclusion of expert investigators from other research centres and healthcare organisations across Australia. The Partnership Centre is investigating ways to improve the performance of the health system in Australia so that it delivers care efficiently and effectively over the long-term. This topic requires research across a broad range of areas including using analytics, technology and shared data to improve health and system performance; reducing waste and low-value care; and promoting better value for the health dollar.

## a magnet for inclusion of expert investigators from other research centres and healthcare organisations across Australia

In parallel, the deep expertise that has evolved in each Centre has catalysed the successful establishment of several Centres of Research Excellence at AIHI. The NHMRC Centre of Research Excellence in Digital Health is tackling the fundamental challenges of truly safe, efficient and effective e-health services for both clinicians and consumers. The NHMRC Centre of Research Excellence in Implementation Science in Oncology aims to enhance cancer care by accelerating the translation of knowledge into policy and practice.

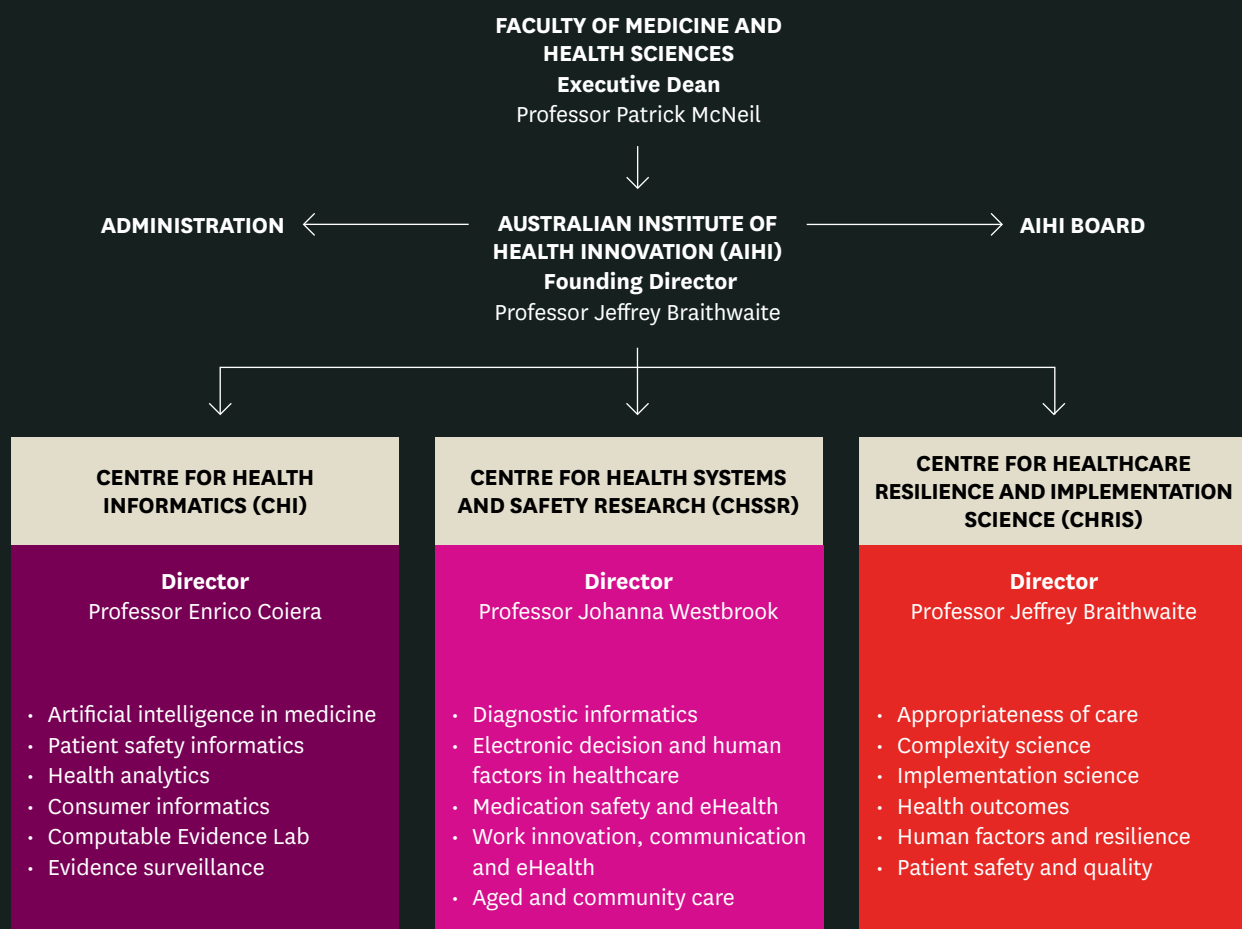
A small but talented team of professional staff ensure that our Institute is as productive as possible. They manage the systems, finances, human resources and the work environment to support the collective research effort. They facilitate connections, translation and dissemination of research findings. They smooth the path for Higher Degree Research scholars and help researchers navigate the complex pathway to receive ethics and governance approval for their research.

This highly successful research Institute is fortunate to be located within MQ Health, Australia's first fully integrated academic health sciences centre at Macquarie University, combining excellence in clinical care, teaching and research.

In addition to its research responsibilities, the Institute contributes to student supervision (PhD and Master of Research candidates) and to the Faculty of Medicine and Health Science's teaching programs. Key teaching responsibilities include supervision of MD (Doctor of Medicine) students' research projects and teaching in the MD and Master of Public Health Programs.



# Organisational structure



NHMRC PARTNERSHIP CENTRE FOR HEALTH SYSTEM SUSTAINABILITY


NHMRC CENTRE OF RESEARCH EXCELLENCE IN DIGITAL HEALTH

NHMRC CENTRE OF RESEARCH EXCELLENCE IN IMPLEMENTATION SCIENCE IN ONCOLOGY

**Global themes:** Patient safety; Improvement studies; Integrated care; Multidisciplinary teamwork; Behaviour change; International health reform; Digital health.



# Centre for Healthcare Resilience and Implementation Science

Ageing populations, medical and technological breakthroughs, limited resources and increasingly sophisticated consumer expectations all combine to make improving the care patients receive from the health system a challenge of the greatest magnitude. The **Centre for Healthcare Resilience and Implementation Science (CHRIS)**  is reconceptualising healthcare systems research to build more resilient systems that will be able to meet this challenge.

## **CHRIS is committed to enhancing understanding of the big picture of healthcare delivery**

CHRIS pursues highly collaborative, multidisciplinary research into how our complex healthcare systems really work and is pioneering new approaches to ensure research findings are translated into better and more cost-effective care. By scrutinising the myriad, dynamic interactions between interconnected webs of clinical professionals, their patients and new healthcare technologies, communication systems and equipment, CHRIS is committed to enhancing understanding of the big picture of healthcare delivery. In particular, the Centre is leading new organisational research into the multitude

of factors that combine to produce system-wide resilience. Such resilience can be harnessed to ensure healthcare organisations are more resistant to costly contemporary challenges, such as medical errors and other iatrogenic harm, and are able to reduce low-value care, improve patient outcomes and save money into the future. CHRIS is also scrutinising the processes of change to help ensure that many more research findings are translated into real world gains for patients, policymakers, healthcare providers and funding agencies.

CHRIS is deeply involved in the NHMRC Partnership for Health System Sustainability and the NHMRC Centre of Research Excellence in Implementation Science in Oncology as well as working with international bodies to embolden global healthcare reform.

# The Sydney Morning Herald

Opinion

## Spoonfuls of advice help the medicine go down

**E**ver since a young girl in a Sydney suburb was killed by a car, the Sydney Morning Herald has been a vocal proponent of road safety. The paper's editor, Jeffrey Braithwaite, has written a column on the subject, and the paper has published a number of articles on the subject. The paper's editor, Jeffrey Braithwaite, has written a column on the subject, and the paper has published a number of articles on the subject.

**J**effrey Braithwaite  
We have the right treatment for children, but the system is broken. The system is broken because it is not designed to work. The system is broken because it is not designed to work.

**T**he system is broken because it is not designed to work. The system is broken because it is not designed to work. The system is broken because it is not designed to work.

# The Sydney Morning Herald

OPINION NATIONAL HOSPITALS

## Where the real solutions to hospital safety lie

By Jeffrey Braithwaite  
20 August 2018 - 4:03pm

The latest rankings of the world's safest airlines and even the safest aircraft to fly are easily accessible online. Yet, when we put our trust in hospitals we have no comparable safety information available to inform our choices. We should.



We need to pay attention when things go right in hospitals as well as learning from mistakes. Photo: Glenn Hunt

# The Sydney Morning Herald

OPINION NATIONAL NEW MEDICINE

## How to fix a sick hospital: attend to its stressed health carers

By Jeffrey Braithwaite  
21 November 2018 - 9:03pm

**A**s a healthcare systems researcher I've spent decades unravelling what it takes to deliver safe, high-quality healthcare. What, then, is going wrong at the much-trumpeted new Northern Beaches Hospital, where anaesthetists are the latest in a long list of health professionals to voice concerns serious enough to warrant the cancellation of all elective surgery?



Protesters outside the Northern Beaches Hospital this week. ANTHONY MARRAS

The government's explanation - that Healthscope miscalculated the number of staff the hospital would need and that more patients than expected spilled through the emergency department's doors - merely reinforces this point. Ditto, the sudden resignation on Wednesday of the hospital's CEO, Deborah Latta.

# croakey

Independent, in-depth social journalism for



**Children's healthcare: new study highlights areas for improvement**

# RN

This Working Life

## The Goldilocks effect

Download audio

Saturday 10 August 2018 5:05AM (view full episode)

Could the speed at which staff walk and talk affect the outcome of the performance in the workplace?

Too fast and work might be rushed, too slow and performance might be poor.

According to Jeffrey Braithwaite, the Founding Director of the Australian Institute of Health Innovation at Macquarie University, that tempo, or pace, reflects something important about what a workplace does and its culture.

He says the ideal set up is the Goldilocks zone.



SHANE THE THREE BEARS WALKS THROUGH THE HOLE IN THE WOODEN COOKER DOOR. ILLUSTRATION BY GUY CARROLL FOR BOOKS THREE - THIS IS THE TIME FOR A BUNNY TO ASSESS

## National study finds 60% adherence to clinical guidelines

25 March 2018 Publication



A landmark national study led by the Australian Institute of Health Innovation at Macquarie University on the standard of healthcare for children in Australia has found children receive care in line with clinical practice guideline recommendations on average 60 percent (59.8%) of the time for 17 common medical conditions.

The CareTrack Kids study (https://www.aish.com.au/news/2018/03/25/caretrack-kids-study-60-adherence-to-clinical-guidelines) published today in the Journal of the American Medical Association evaluated care for 4,689 children under 16 years of age, and involved 139 healthcare providers across New South Wales, Queensland and South Australia. The study is the largest of its kind ever conducted.

Two chief investigators of the CareTrack Kids study and authors of this publication are Sydney Children's Hospital Network's Director of Research, Professor Chris Cowell and Associate Director of Research, Professor Adam

http://www.aish.com.au/clinical-trial-study-60-adherence-clinical-guidelines

# CHRIS Research streams

## APPROPRIATENESS OF CARE AND PATIENT SAFETY

**Professor Jeffrey Braithwaite**  
jeffrey.braithwaite@mq.edu.au

**Honorary Associate Professor Peter Hibbert**  
peter.hibbert@mq.edu.au

We conduct research to determine whether Australians receive healthcare that is evidence-based, following the recommendations of clinical guidelines produced by medical specialties and government organisations. When evidence-based care is not delivered to patients reliably, they can be subject to misdiagnosis, or delayed treatments, or they may suffer harm from reactions to unnecessary medications.

We are now assessing the delivery of evidence-based care in aged care facilities. People living in residential aged care facilities are the sickest and frailest of the aged population, and it is critical that they receive care that is best practice. ↗

## IMPLEMENTATION SCIENCE

**Professor Frances Rapport**  
frances.rapport@mq.edu.au

The Implementation Science research stream concentrates on translating into practice the outcomes from health services research. We promote the uptake of findings into routine healthcare contexts, policy documents and organisational development.

Our ground-breaking work includes the assessment of service use for complex epilepsy in NSW and the reporting of patients' and healthcare professionals' perceptions of risk in breast cancer.

Recently, funding has been awarded by Cochlear Ltd to explore adults over 50 years with hearing health problems; St Vincent's Health Australia to study organisational patient-centred care practices; and MQ Gastroenterology. ↗

## COMPLEXITY SCIENCE

**Professor Jeffrey Braithwaite**  
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Healthcare is increasingly recognised as a complex system, with multiple levels of interacting stakeholders and groups (e.g. patients, government, doctors and nurses). This interaction leads to unpredictable outcomes, making understanding, influencing and improving the healthcare system a challenge of the greatest magnitude. The Complexity Science stream provides leadership on understanding this complex system, with the goal of improving healthcare.

During 2018, we continued to undertake and build exciting collaborations on a wide range of projects including: a study on time-motion and organisational culture in four large Sydney hospitals; implementation science projects with multiple flagships within the Australian Genomics Health Alliance; and a national study of accreditation in Denmark. ↗

## HEALTH OUTCOMES

**Associate Professor Rebecca Mitchell**  
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The Health Outcomes stream is conducting large population-based epidemiological and mixed-method research to examine health outcomes. Our expertise lies in driving research translation from big data analysis to public health and healthcare policy and practice change.

We have undertaken a wide range of research projects, including examining child injury, traumatic brain injury and hip fracture treatment and rehabilitation, and are also part of an international expert group examining occupational health and safety in the aquaculture industry for the Food and Agriculture Organization of the United Nations. ↗

## HUMAN FACTORS AND RESILIENCE

**Dr Robyn Clay-Williams**  
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Human Factors is a scientific discipline focused on understanding the interaction between people and their environments. Human-centred design is central to Human Factors and involves co-designing new systems, equipment or medical devices with users, and testing and evaluating the design to ensure it meets their needs. When applied to healthcare, this understanding can lead to better design of hospital systems and safer care for patients.

Resilience is the ability of a team or organisation to continue to function safely when challenged by unexpected events. Resilient Health Care focuses on understanding how work is done, and in using that knowledge to develop systems that are better able to cope with the unexpected. ↗





## CareTrack Kids

Results from the CareTrack Kids study were published in JAMA, one of the world's most prestigious medical journals. CareTrack Kids showed that evidence-based care was provided on 60% of occasions and has made an important international contribution to helping policy makers prioritise improvement in children's care.



## Top 5 cited papers

Findings from the PRIME Model (Patient Reported Implementation Science) were published in the Journal of Epilepsy & Behavior and became one of the journal's top five most highly cited papers in 2018.



## Quality in healthcare

In one of the world's largest studies of the relationship between quality management and patient factors, the Deepening Our Understanding of Quality in Australia (DUQuA) project completed data collection and began analysis for 32 large public hospitals across Australia.



## Child Injury Prevention

The Federal Government committed \$900,000 to the development of the next national injury prevention plan, based on research into child injury hospitalisations in Australia.



## Thought leadership

The paper - When complexity science meets implementation science - published in BMC Medicine, has been described as an "overall paradigm shift" and "emerging thinking regarding research translation in the international literature".



## Better Care Framework

The Better Care Framework underpinning the Royal Australasian College of Medical Administrators' Clinical Governance work was synthesised from research, which has received two international awards (2016, 2018).



## Patient safety

Recommendations to improve patient safety in healthcare investigations have been adopted state-wide by the Victorian Department of Health and Human Services.



## Ongoing research

Further in-depth research and collaboration has begun with four large Sydney hospitals in the time-motion and organisational culture study.



## Engagement

The Zero Childhood Cancer Project and the NHMRC Centre of Research Excellence in Implementation Science in Oncology are engaging academics, clinicians and policy makers.



## Resilient health care

Resilient Health Care principles were implemented across Townsville Hospital and Health Service.



# 'They can't help it': Australians struggle with technology 'addiction'

By Andrew Taylor  
October 21, 2018 - 12:00pm



A growing number of Australians are checking their screens from the moment they wake and every 12 minutes throughout the day – and they're not happy about it.



View all comments

### Taking notes

- Rule 1: The first person to answer a call or text in a restaurant pays for everyone's food
- Rule 2: Disable social media notifications
- Rule 3: Switch off smartphones for 3 periods of time
- Rule 4: Ban all smartphone usage in shops, on public transport or while walking

The Sen Group's *Switching Off* survey found Australians readily admit to over-dependence on technology and are concerned about the incursion of screens into their daily lives.

"Checking their screen is the first thing they do in the morning and the last thing they do at night," the survey said. "They can't help it. Their device is always with them."



## THE AUSTRALIAN Robot GPs not science fiction

Powell, Sian · The Australian · Canberra, A.C.T. [Canberra, A.C.T.] 15 May 2018: 6.

Australia should use some of the recently announced Medical Research Future Fund's \$240 million for frontier science and seize the opportunity of developing next-generation artificially-intelligent healthcare systems, according to an Australian expert in the field.

Enrico Coiera, a health informatics expert at Macquarie University, said a possible scenario could include patients explaining their symptoms and their illness history to an artificially intelligent agent before the patients see a human doctor.

### THE LAST WORD

#### MOVING HEALTHCARE TO THE ARTIFICIAL INTELLIGENCE FRONTIER

Welcome to Research Australia's newly dedicated space for **Opinion Editorial** – a space to share the points of view of members. This Australia's direction and best thought leaders on pressing issues.

**INSPIRE**  
Frontiers edition

**MACQUARIE**  
UNIVERSITY

**The Lighthouse**

OUR STORIES

## How social media threatens our health

**WRITER**  
Fran Molloy

**DATE**  
19 September 2018

**FACULTY**  
Faculty of Medicine and Health Sciences

**TOPIC**  
Diet, Nutrition, Health and Medicine

**TAGS**  
Facebook, Health, Misinformation, Social Media

*There's an epidemic of health misinformation on social media platforms such as Facebook.*

People turn to social media for information on critical subjects such as health and immunisation – but these platforms are riddled with inaccuracy and misinformation, researchers have revealed.

# Centre for Health Informatics

The **Centre for Health Informatics (CHI)** explores the application of novel digital technologies in healthcare with a specific focus on Artificial Intelligence (AI) and its implications for transforming models of care, driving system-wide change and delivering more personalised healthcare.

## CHI explores the application of novel digital technologies in healthcare with a specific focus on Artificial Intelligence

The main highlight of 2018 was the creation of the Australian Alliance for Artificial Intelligence in Healthcare which formed after 18 months of building relationships with key stakeholders and a strategic workshop held in August. The AI Alliance will address a multidisciplinary and whole-of-nation challenge which spans cutting-edge machine learning research through to translation. With over 50 partners and engaged stakeholders, the AI Alliance includes leading researchers in this field, academia, five state health departments, peak bodies, consumers and major national

and international industry partners. The Centre has grown to support these developments with the addition of a Research Fellow and a Post-Doctoral Research Fellow in AI and an Associate Professor, commencing 2019.

The second highlight was the further development of the Piano clinical data research infrastructure and the creation of a new company, Evidentli, to commercialise this technology. Piano is currently used at Macquarie University Hospital, the Australian Hearing Hub and other areas at Macquarie University. Also, Piano was one of only three successfully funded applications to eHealth NSW. The Centre was also awarded eight new grants in 2018 totalling \$694,455.



# Research streams

## EVIDENCE SURVEILLANCE

### Associate Professor Adam Dunn

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The Evidence Surveillance team concentrates on solving problems related to the production, reporting, and use of evidence in clinical medicine and public health. Our first area of focus is in clinical research informatics, where we create new ways to make better use of the results from clinical trials in systematic reviews. We discovered, for example, previously unrecognised biases in systematic reviews that affect conclusions about safety and efficacy of drugs.

Our second area of focus is in public health informatics, where we have developed new ways to measure how health evidence and misinformation spread and persist in the public domain, influencing attitudes and behaviours. Our major work in the area looks at the uneven spread of anti-vaccine myths and misinformation, and its association with differences in vaccination intentions. ↗

## ARTIFICIAL INTELLIGENCE IN HEALTH

### Professor Enrico Coiera

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This cross-centre program focusses on researching and developing artificial intelligence solutions to support healthcare tasks. Through our work, we have provided leadership and commentary for the safe and sustainable adoption of AI in healthcare. ↗

## CONSUMER INFORMATICS

### Dr Annie Lau

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The Consumer Informatics stream investigates the science, design and impact of digital health for patients and consumers. We are passionate about understanding and improving the health of individuals through the use of digital technology.

We work closely with patients, consumers and multidisciplinary colleagues to identify important gaps, and together we develop innovative ideas and apply rigorous methods to test the boundaries of how digital technologies can improve our health. ↗

## HEALTH ANALYTICS

### Associate Professor Blanca Gallego Luxan

enrico.coiera@mq.edu.au

As researchers of health data analytics for clinical decision support, our two main tasks in supporting personalised delivery of care are: – prediction (to guide diagnosis, prevention and prognosis) and causal inference (to guide treatment recommendations).

Although most proposed clinical prediction instruments have been validated, very few have been analysed for their post-implementation impact. Moreover, there are very few standards against which new tools can be benchmarked. ↗

## PATIENT SAFETY INFORMATICS

### Associate Professor Farah Magrabi

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In the next few years, a new generation of interactive software agents incorporating AI will support both clinicians and consumers across a wide set of healthcare tasks. Alongside its many benefits, AI can introduce new, often unforeseen, modes of failure that affect the safety and quality of care and lead to patient harm. We are researching the safety risks of AI in healthcare and developing new methods for timely detection and response to emerging threats.

Our research has changed digital health policy and we have been asked to contribute to national and international debate to improve digital health safety. ↗

## COMPUTABLE EVIDENCE LAB

### Dr Guy Tsafnat

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The Computable Evidence Lab researches and develops computer systems that empower researchers to create and disseminate clinical research. Our flagship system, Piano, is a research automation platform designed to accelerate the production of primary and secondary evidence in a transparent and reproducible manner that facilitates peer review and combats waste. To achieve this, Piano integrates data with analytics, machine learning and natural language tools that perform specific research tasks, into complete research workflows that are then kept up to date automatically.

A new start-up company, Evidentli Pty Ltd, has been formed to take Piano to the global arena by commercialising its technologies. ↗



## New ISO

ISO, the International Organization for Standardization, adopted our safety classification for the surveillance and analysis of IT events as the basis for a new guideline (ISO/TS 20405).



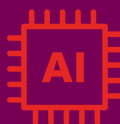
## Web-based system

trial2rev – a web-based system for systematic review surveillance – was released.



## A world first

The world's first fully automated systematic review on recurrence of cardiovascular events post stent procedures was presented at the International Collaboration on Automation of Systematic Reviews in London.



## Impact of AI

Professor Coiera contributed to strategic planning with the Royal Australian and New Zealand College of Radiology, exploring the impact of AI on the profession.



## Digital Scribe

The first stage of the Digital Scribe project was completed aiming to provide intelligent electronic support to clinicians.



## Published work

Work was published in mainstream and specialised media including *The Australian*, *Research Australia's Inspire* magazine and in leading journals including *JAMIA*, *The Lancet*, *npj Digital Medicine* and *AIMed Magazine*.



## Best Paper award

Best Paper award was received from the 32nd British Human Computer Interaction conference for the paper on user experience in the evaluation of interactive systems.



## Patient data

Research has begun with University College London and Oxford University to investigate new ways to visualise patient data.



## Patient Work study

A Patient Work study has begun with MQ Health, where people with type 2 diabetes use innovative digital tools (such as body camera) to record their daily health activities.



## Mobile technology

Successful collaboration continues with St Vincent's Hospital Network and UNSW in using mobile technologies to support self-care for patients.



## Highly cited paper

The paper – Predicting 7-day, 30-day and 60-day all-cause unplanned readmission: a case study of a Sydney hospital – in *BMC Medical Informatics and Decision Making* was highly cited.



## International study

Design of a wide international study has begun with emergency medicine clinicians on predictive tools for clinical decision support.



## Electronic management

Input was provided to the Australian Commission on Safety and Quality in Health Care for the National Roundtable on electronic medication management.



## Piano

The collaboration with Macquarie University Hospital (MUH) using Piano was launched allowing researchers to access and query aggregate data from MUH, for the first time, without having to also wait for (and fund) specific information extractions.



# Centre for Health Systems and Safety Research

From hospitals to aged care services, health information communication technologies are designed to make things better – from greater efficiency to improved patient safety. However, the implementation of these technologies is complex and often disrupts healthcare delivery. The **Centre for Health Systems and Safety Research (CHSSR)** continues to tackle important research questions about how health information communication technologies can be designed, utilised and deliver improved outcomes for Australians. Effective information exchange, communication and teamwork are essential elements of the patient safety puzzle. Through our design and application of complex multi-method evaluation models, our research is delivering high quality evidence to inform decision-making and drive changes in healthcare policy and practice.

## CHSSR's research is delivering high quality evidence to inform decision-making and drive changes in healthcare policy and practice

During 2018 the CHSSR team conducted internationally significant studies across our five research streams. In response to the World Health Organization's global patient safety challenge to reduce medication harm by 50%, our researchers produced a detailed systematic review of current evidence of medication error related harm; conducted a trial of the impact of electronic medication systems for reducing errors among children in hospital; and investigated patterns of medication use among residents in residential aged care facilities. The Diagnostic Informatics team also addressed issues of test result follow-up and the role of consumers and hospital clinicians and looked at the impact of rapid flu testing and patterns of pathology testing in hospitals and general practice.

Our research in teamwork and communication was bolstered by a new NHMRC Partnership Grant in collaboration with St. Vincent's Health Australia to evaluate the effectiveness of an organisation-wide culture change program to reduce unprofessional behaviours by healthcare staff.

The Centre also conducted significant research regarding electronic decision support systems and commenced a new NHMRC Partnership Grant investigating the effects of drug-drug interaction alerts in electronic medication systems. In conjunction with the Clinical Excellence Commission, our data analytics team released a report on the evaluation and optimisation of tools for early detection of sepsis.

The Royal Commission into Aged Care Quality and Safety began in 2018 and will focus on many of the key issues that our Aged Care Evaluation and Research team have been studying. This includes innovative approaches to data linkage and analytics of electronic health record data in the aged and community care system to monitor quality and outcomes of older Australians.

This widespread growth in our research programs has seen an increase in the size and diversity of our team.



THE CONVERSATION

Bullying and harassment of health workers endangers patient safety

As we gather today in the Medical Journal of Australia, between one-quarter and half of doctors and nurses in Australia have been bullied, discriminated against or harassed at work.

Bullying, harassment and other unprofessional behaviours are culturally ingrained in the Australian health-care system.

As we gather today in the Medical Journal of Australia, between one-quarter and half of doctors and nurses in Australia have been bullied, discriminated against or harassed at work.

InSight+

5 November 2018

### Aged care: no need to wait for Royal Commission

As a researcher investigating aged care, I'm encouraged that the terms of reference for the Royal Commission into Aged Care Quality and Safety will leave few stones unturned. But while the government and the public will have to wait at least 12 months for the Commission's first interim report, there's a wealth of information already available that could, and should, be telling us what is going wrong, where and why.

Australia's aged care system is awash with data. Providers are required to routinely collect vast amounts of information about their clients and services. However, those separate data silos are rarely joined up or used to inform the many important decisions that could drive improvements in care. And so the data are rarely analysed in ways that are useful to frontline staff or management, their quality inevitably declines. As such, this huge bureaucratic undertaking is often reduced to a "tick a box" exercise of little value.

With a shift underway from those forgotten piles of paper to electronic records, we now have an invaluable opportunity to turn this around. As more aged care organisations adopt electronic records we have our best chance to date to "crosshouse" information in order to identify, predict and target problems, and to then monitor the effectiveness of improvement efforts.

Working with some of Australia's largest aged care providers, we have been testing this approach. Using routinely collected electronic medication data from over 70 Australian residential aged care facilities, we have built a picture of the medications being used, including antipsychotic drugs. The recent ASC Four

MJA

InSight+ Newsletter and website open to all

### Endemic unprofessional behaviour in health care: the mandate for a change in approach

Unprofessional behaviour is sufficiently widespread in the Australian health care system that it could be considered endemic. The 2016 survey of the Victorian Public Sector Commission found that 25% of staff in health agencies experienced bullying, and in a 2016 survey of the Australian Nursing and Midwifery Federation, 49% of nurses reported bullying or harassment in the previous 12 months. In 2016, the Royal Australian College of Surgeons surveyed 306 surgical Fellows, trainees and international medical graduates and found that 81% had been subjected to discrimination, bullying, harassment or sexual harassment. The Australian College for Emergency Medicine followed in 2017 as survey results: 34% of respondents had experienced bullying, 20% discrimination, 16% harassment and 6.2% sexual harassment. Thus, unsurprisingly, the 2016 Senate inquiry into the medical complaints process concluded that bullying, discrimination and harassment levels remain discouragingly high despite the equipment tools.

Health Report

### Bullying, harassment 'endemic' in Australian health care system

New research suggests bullying and harassment has become endemic in Australia's health system.

The report – published today in the Medical Journal of Australia – says pervasive bullying, discrimination and sexual harassment in the nation's hospitals is now putting patients at risk.

It comes a week after departments in two major hospitals in Sydney were stripped of their accreditation to train doctors because of allegations of bullying by surgeons.

Guests: Dr Neroli Sunderland

Research Fellow, Centre for Health Systems Safety Research, Australian Institute of Health

AHHA in the news

The Health Advocate

### Home care reforms and older people – well-informed, but not well-informed

Home care reforms and older people – well-informed, but not well-informed

Home care reforms and older people – well-informed, but not well-informed

Home care reforms and older people – well-informed, but not well-informed

# Research streams

## DIAGNOSTIC INFORMATICS

**Professor Andrew Georgiou**

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Diagnostic informatics encompasses the role of information technology in key areas of the diagnostic testing (pathology and medical imaging) process. It includes key areas of the process, starting with the selection of the appropriate test or referral to address a clinical question, the quality and efficiency of the analytical process, and finally the interpretation, communication and follow-up of test results (including engagement with patients) and their impact on improving healthcare and patient outcomes.

Our research can thus include studying the choice of the appropriate laboratory or medical imaging request, the quality and efficiency of the analytical process, and the interpretation and follow-up of test results and their impact on patient care outcomes. ↗

## MEDICATION SAFETY AND EHEALTH

**Professor Johanna Westbrook**

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Medication errors are a major cause of preventable patient harm and globally are associated with costs of \$42 billion annually. eHealth interventions, such as electronic medication management systems in hospitals, have the potential to reduce medication errors and improve patient safety. Our research evaluates eHealth interventions in hospitals and aged care and their risks and impacts on medication errors, harm, and staff work. The evidence we provide is crucial to facilitate policymakers' and healthcare organisations' informed decisions about investments and prioritisation of health IT systems. ↗

## AGED CARE EVALUATION AND RESEARCH (ACER)

**Professor Johanna Westbrook**

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Our team's mission is to improve the health and wellbeing of older Australians by enhancing the delivery of aged care services. As aged care clients and providers begin to use new technologies to collect and communicate information, our team is focused on:

- Integrating health and aged care information to answer important questions about care journeys and outcomes.
- Helping providers use data they already collect to monitor quality of care.
- Using technology to keep track of social participation and quality of life, which are meaningful outcomes of community and aged care services.
- Improving methods to record social interactions in aged care.
- Monitoring and evaluating policy initiatives.
- Engaging aged care clients and staff in research.
- Providing valuable information to ensure that aged care services and policy are consistent with the needs and preferences of older people. ↗

## WORK INNOVATION, COMMUNICATION AND EHEALTH

**Professor Johanna Westbrook**

johanna.westbrook@mq.edu.au

Understanding the way clinical care is delivered is central to supporting effective and safe care. Our research investigates patterns of clinicians' work, and how information and communication technologies (ICT) influence workflow and workloads; and patient safety.

Projects have included investigation of the relationship between organisational culture and ICT use, the impact of electronic health record systems on workflow and efficiency, and clinicians' actions in response to electronic decision support alerts. This research covers broad discipline areas such as cognitive psychology, process engineering, communication processes, health informatics and operations research. ↗

## ELECTRONIC DECISION SUPPORT AND HUMAN FACTORS IN HEALTHCARE

**Associate Professor Melissa Baysari**

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With the transition from paper records to electronic systems, there is an expectation that interactions between a user (e.g. clinician) and health information technology (e.g. electronic medical record), will be smooth, quick, easy, and error free. Unfortunately, this is rarely the case. Users often complain about systems being clunky, unintuitive, and time-consuming. The focus of the work undertaken in this stream is to understand and improve the fit between users and health information technologies. ↗



## Diagnostic Informatics

Royal College of Pathologists invited the Diagnostic Informatics team to present at several Quality Assurance Program seminars and conferences.



## Consumer partnerships

Workshops partnering with consumers as co-developers of the research process were well attended and insightful.



## New alert table

Collaboration with the Australian Association of Clinical Biochemists' and Royal College of Pathologists of Australasia's Critical Risk Working Party resulted in the development of a professional training program to produce a harmonized, evidence-based Alert Table for high risk tests in Australasian laboratories.



## Medication management

Timely feedback on electronic medication management systems and hospital policies has resulted in immediate improvement to work practices and patient safety in partner hospitals.



## Family support

Findings on costs to patients and families of a child's hospitalisation are being used by health system partners to inform support provided to families.



## Medication errors

Working in partnership with the Sydney Children's Hospital Network in 2018, data collection was completed for the first Australian trial assessing the impact of an electronic medication management system on medication errors in a children's hospital.



## Paediatric dose errors

Valuable meta-analysis of dose errors in paediatric inpatients (published in Drug Safety) estimated that 5% of medication orders will have a dose error.



## Aged care outcomes

Large-scale studies to evaluate important aged care outcomes such as wellbeing, health status, medication use, pressure injuries and delayed entry to residential care were conducted. These applied studies resulted in six publications, four media articles and three newly funded projects to develop novel research methods in social factors in aged care.



## Questions in parliament

Research translation activities facilitated new collaborations with the local Primary Health Network and resulted in invitations to speak to key federal politicians, prompting questions on the floor of parliament about community aged care.



## Ageing Well project

Successful stakeholder forums were hosted as part of the Ageing Well project bringing together consumers, providers and policy makers. [↗](#)



## Workplace behaviour

The perspectives piece published in the MJA – Endemic unprofessional behaviour in health care: the mandate for a change in approach – received widespread media attention, and highlighted the need for research to guide evidence-based approaches to improving workplace behaviour.



## Staff wellbeing

The Longitudinal Investigation of Negative Behaviour (LION) survey at seven hospitals across three states, resulted in more than 5,000 completed surveys. This survey collects detailed data on the prevalence and types of unprofessional behaviour in the hospital workplace, and the impact on staff wellbeing and patient care.



## Collaboration

Work with the Australian Commission on Safety and Quality in Health Care on allergy and adverse drug reaction incidents associated with clinical information system (CIS) use provided the Commission and the Australian Digital Health Agency with information on how clinicians understand and interpret allergies and adverse reactions, and how and where documentation of these is done in the CIS.





# NHMRC Partnership Centre for Health System Sustainability



Health System Sustainability  
NHMRC Partnership Centre

**VISION:** Our research findings will significantly influence the development of a resilient healthcare system that is affordable, cost-effective and delivers improved health outcomes for all Australians.

The NHMRC Partnership Centre for **Health System Sustainability** is a \$10.75 million five-year collaboration involving 17 lead investigators, 20 expert advisors and over 40 system implementation partners from around the country. The Centre is led by Professor Jeffrey Braithwaite and commissioned many research activities in 2018.

## WHY IS THE PARTNERSHIP CENTRE NEEDED?

Ageing populations, increasing rates of chronic and complex diseases, growing cost pressures from new medical technologies and medicines, wasteful spending on low-value care, inefficiencies due to system fragmentation and limited use of data and evidence to support reform have been identified as threats to the performance and sustainability of the health system.

## WHAT DOES THE PARTNERSHIP CENTRE DO?

We are committed to disseminating ideas and evidence to improve the performance of the health system so that it delivers care efficiently and effectively over the long-term. We believe that an effective and efficient healthcare system is the hallmark of a caring, well-functioning society. The Centre aims to maximise health system improvement in the real-world by bringing together all those who provide, plan or need healthcare. As our Chief Investigator, Professor Jeffrey Braithwaite, says “*collaboration underpins all productive change*”.

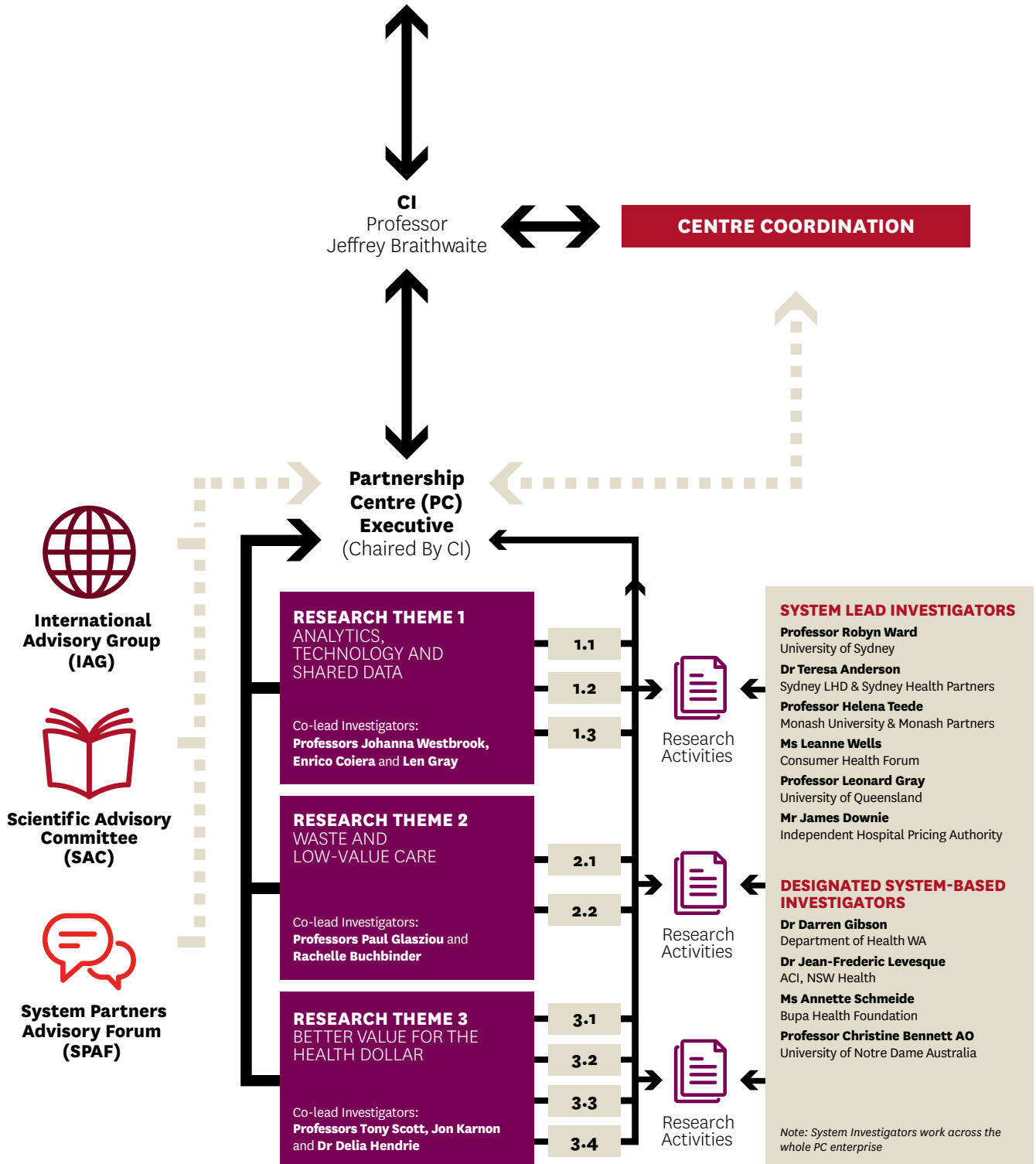
The three broad themes of our research include:


- Using analytics, technology and shared data
- Reducing waste and low-value-care
- Promoting better value for the health dollar

## ACHIEVEMENTS IN 2018

During our first full year of operation, we brought together for the first time what is already known, world-wide, about sustaining the performance of health systems into the future. We have engaged extensively with system partners and health consumers across Australia through research projects, consultations, joint meetings and workshops. This led to new collaborations, new publications and increased media engagement. Taken collectively, our research team have published over 150 peer-reviewed papers relating to health system sustainability.

**Governance Authority (GA)**  
NHMRC AND FUNDING PARTNERS





# Research streams

## USING ANALYTICS, TECHNOLOGY AND SHARED DATA

**Professors Johanna Westbrook, Enrico Coiera, Len Gray**

This research stream tackles important questions in informatics and healthcare including using big data to improve care, diagnostic testing and medication management, as well as designing analytics to guide better healthcare decisions. Researchers are also re-examining how telehealth might best be deployed and funded to improve healthcare across the country.

## HIGHLIGHTS

Research underway on the effect of electronic medication systems on medication error rates in paediatric settings will identify the extent to which these systems are effective at reducing error rates and associated harm. Research like this is helping us understand the impact of IT on the health system and how IT design and work processes can be targeted to improve their effectiveness.

As the Royal Commission into Aged Care Quality and Safety began, Professor Westbrook wrote in *MJA InSight+*: "...there's a wealth of information already available that could, and should, be telling us what is going wrong, where and why". Our research is testing new innovative models for applying data analytics to electronic health record data to provide a comprehensive picture of medication use in aged care facilities. This is providing new information about, for example, the extent of hyper-polypharmacy and antipsychotics uses – information that can be used to support immediate system improvements.

Another key area of research is the use of technology to provide information to patients and health professionals. A recent paper by Professor Coiera's team examined how programs – designed to help patients decide if their symptoms are serious or not – are evaluated. Their work uncovered significant issues with evaluation methods and program performance, which underscored the urgent need for new guidelines to evaluate the safety, effectiveness and cost of these systems. The team are also conducting a systematic review of studies on hospital dashboards in order to provide a comprehensive view of electronic dashboards, their functionality and usefulness.

Professor Gray's team has conducted a large scoping review and convened an expert panel to gain insight into how telehealth technology, in all its forms, impacts access to and quality of care. They have looked at factors including who bears the cost and if it is a new or alternative means of providing the service.

**...there's a wealth of information already available that could, and should, be telling us what is going wrong, where and why**





### REDUCING WASTE AND LOW VALUE CARE

**Professors Paul Glasziou, Rachelle Buchbinder**

Approximately, 30% of healthcare is wasteful or of low-value. Researchers from this stream are finding ways to reduce wasteful expenditure and deliver more cost-effective services.

### HIGHLIGHTS

Investigators are conducting foundational work using systematic reviews, workshops and webinars involving health system partners and consumer groups to co-design the practical applications of their research findings. Professor Buchbinder's team recently published a protocol for a scoping review investigating alternative service models for delivery of healthcare services in high-income countries. The final review is being prepared for publication.

A Delphi study conducted by Professor Buchbinder's group prioritised the 'best buys' in relation to alternative models of care described in the literature and this informed a stakeholder workshop. A list of high priority alternative models of care is being finalised in preparation for further investigation including trialling relevant models with health system partners.

Professor Glasziou's team recently published a novel analysis of population data, which estimates that over 40% of prostate cancers in Australia are over-diagnosed – that is, cancers detected that would not have become symptomatic nor had any health impact in the person's expected lifetime. The team have also recently completed and submitted an analysis of the rates of overdiagnosis for all cancers (which found a rate of 24% for males; 18% for females), and are making progress on non-cancer overdiagnosis rates.

### RATES OF OVERDIAGNOSIS FOR ALL CANCERS





### **PROMOTING BETTER VALUE FOR THE HEALTH DOLLAR**

**Professors Tony Scott, Jon Karnon and Dr Delia Hendrie**

Investigators in this stream developed new frameworks and new metrics to improve health system sustainability.

### **HIGHLIGHTS**

The in-DEPth (Evidence-informed, co-creation framework for the **D**esign, **E**valuation and **P**rocedure of **H**ealth services) framework, developed by Professor Karnon and Dr Kenneth Lo, supports wiser commissioning of primary health services by Primary Health Networks (PHNs). The framework has been published and disseminated to PHNs via a webinar attended by over 100 people and supported by the Health Services Research Association of Australia & New Zealand. The framework is being tested through partnership with two PHNs.

In addition, Professor Karnon and Mr Andrew Partington are working with the South Adelaide Local Health Networks to apply a local evaluation model to understand potential causes of comparatively long lengths of stay for ventilated patients. This data will inform the modelling of the costs and effects of alternative approaches to improving care for ventilated patients.

Professor Scott's team developed and tested a new method to measure hospital quality using a compound index. The index brings together diverse data sources to measure hospital performance more holistically, enabling the ranking of hospital performance and surveillance of changes when a new policy or management practice is introduced. The role of market competition is also a focus of study for Professor Scott.

Dr Hendrie and Professor Elizabeth Geelhoed are continuing their evaluation of the ten-year Research Translation Program (RTP) conducted by the Department of Health in Western Australia. The RTP provides funding to support investigator-initiated research projects to improve efficiencies and cost reduction in healthcare delivery in the WA public health system. In developing new frameworks to support uptake and sustainability of research-based solutions to improve state-wide health service performance, they plan to adopt a system dynamics model to facilitate a more comprehensive assessment of the pathways linking processes between research and its impact.



## **CENTRE COORDINATION AND RESEARCH UNIT**

### **Associate Professor Yvonne Zurynski**

The Unit is based at AIHI and oversees Partnership-wide activities, coordinates engagement with investigators, stakeholders and funders and ensures wide dissemination of research findings.

Associate Professor Yvonne Zurynski was appointed as Australia's first associate professor for health system sustainability and leads the Unit. Associate Professor Zurynski is a health services researcher and evaluator, with expertise in policy analysis.

## **HIGHLIGHTS**

### **SYSTEMATIC REVIEWS**

We are progressing three literature reviews on different aspects of health system performance sustainability, including a systematic review of international policy and opinion.

### **RESEARCH AUSTRALIA**

The Partnership Centre and AIHI were commissioned by Research Australia to prepare a report titled, *Maximising MRFF Impact: Recommendations for Accelerating Research Translation and Implementation*, which provides recommendations for accelerating and measuring the impact of medical research on the health system and the broader society.

### **CONSUMERS HEALTH FORUM OF AUSTRALIA (CHF)**

With CHF, we developed a health consumer sentiment survey to gauge the public's views about multiple aspects of the Australian healthcare system. The survey has been piloted with 1,200 respondents across Australia.

### **AUSTRALIAN HOSPITALS AND HEALTHCARE ASSOCIATION (AHHA)**


Partnering with AHHA, we ran a Crowd-Wisdom Survey at the World Hospital Conference to gauge views of delegates about factors affecting health system sustainability.

### **COMMUNICATING FINDINGS**

The Centre also works on capacity building and supporting researchers to communicate their findings to policy-makers, health service providers and the public. Recognising the importance of working closely with health departments, Chief Investigator, Professor Braithwaite, has met with system influencers to promote the real-world value of health system sustainability research and gain their perspectives.

### **INVESTIGATOR WORKSHOPS**

We hosted two investigator workshops. The first focused on research progress, collaboration and future strategy. The second was a workshop with the 'Reducing waste and low-value care' team to prioritise the application of their research findings in collaboration with system and consumer stakeholders.

For more details on our research and a full list of publications, please see our website [healthsystemsustainability.com.au](https://healthsystemsustainability.com.au) 



# NHMRC Centre of Research Excellence in Digital Health



## COLLABORATIVE PARTNERS

- Professor Enrico Coiera, AIHI, Macquarie University
- Professor Paul Glasziou, Bond University
- Professor William Runciman, University of South Australia
- Dr David Hansen, CSIRO Australian e-Health Research Centre
- Professor Teng Liaw, UNSW Sydney
- Associate Professor Farah Magrabi, AIHI, Macquarie University
- Associate Professor Vitali Sintchenko, University of Sydney
- Professor Karin Verspoor – University of Melbourne
- Associate Professor Blanca Gallego-Luxan, UNSW Sydney
- Dr Annie Lau, AIHI, Macquarie University

## The NHMRC Centre of Research Excellence in Digital Health (CREiDH)

was formed to tackle the fundamental challenges that impede the creation of truly safe, efficient and effective e-health services for both clinicians and consumers. CREiDH targets the following three research programs, aiming to fill critical evidence gaps in policy and practice related to e-health implementation:

1. Safety and quality of digital health systems
2. Advanced clinical analytics
3. Consumer digital health

CREiDH also provides a rapid-response research function to provide independent evidence-based recommendations on policy and practices issues to government, health services, consumers, clinicians and industry. Alongside the research focus is the workforce development program involving doctoral training and real-world translational experience and which is delivered through the Australasian Health Informatics Fellowship by Training Program.

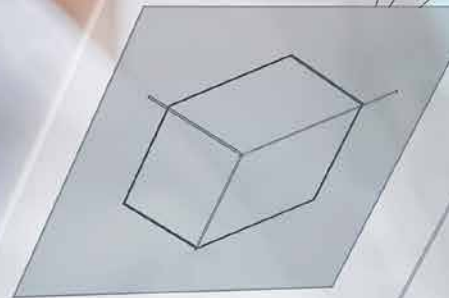
CREiDH is led by Professor Enrico Coiera and administered by AIHI.

## RAPID RESPONSE TEAM

In 2018, after reviewing the international methodological literature, we developed the CREiDH framework for priority setting for the rapid reviews of digital health technologies. We conducted two rapid reviews for the National Children's Digital Health Collaborative which will be published in 2019. The first reviewed consumer generated data entered in electronic health records or portals. The second reviewed consumers' engagement with electronic health records, portals and apps.



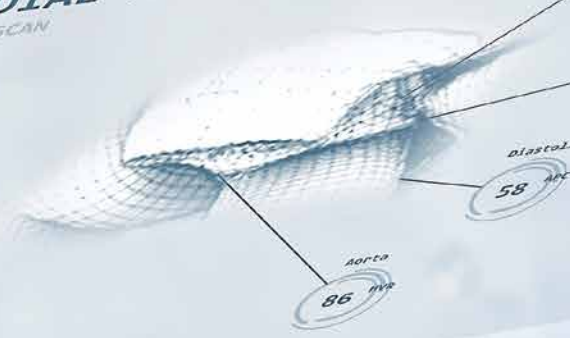




NAME  
AGE  
GENDER  
RACE  
NATIONALITY  
RELIGION  
MARITAL STATUS  
SIBLINGS

### MYOCARDIAL MONITOR BIOPSY

3D WIREFRAME SCAN







**THE AUSTRALASIAN COLLEGE OF HEALTH INFORMATICS FELLOWSHIP BY TRAINING PROGRAM**

The Australasian College of Health Informatics Fellowship by Training Program is funded by CREiDH and meets an identified workforce need for highly trained health informatics leaders. In 2018 the Program accepted 22 candidates from a diverse range of backgrounds, across 13 Australasian universities. We delivered a strong learning program, including five masterclasses led by internationally recognised experts and our inaugural Annual Colloquium at HIC 2018. Three candidates gained valuable professional experience in work placements within various government departments and corporations. We developed strong collaborative relationships across the health informatics sector and commenced discussions about expanding internationally.

**THE AUSTRALIAN ALLIANCE FOR ARTIFICIAL INTELLIGENCE IN HEALTHCARE**

CREiDH led the development and creation of the Australian Alliance for Artificial Intelligence in Healthcare. The mission of the AI Alliance is to translate frontier AI technologies into real-world health services and transform healthcare through AI innovation to deliver new models of healthcare that are more personalised, effective and safe. The AI Alliance strategically unites over 50 organisations, including pre-eminent Australian leaders in the research and application of health AI and major international partners. With members from industry, government, health services and academia as well as consumers, the AI Alliance will also establish critical capability-building programs to address fundamental national barriers to AI adoption including workforce, quality, safety and ethics.





Implementation Science  
in Oncology

NHMRC CENTRE OF RESEARCH EXCELLENCE

# NHMRC Centre of Research Excellence in Implementation Science in Oncology



## COLLABORATIVE PARTNERS

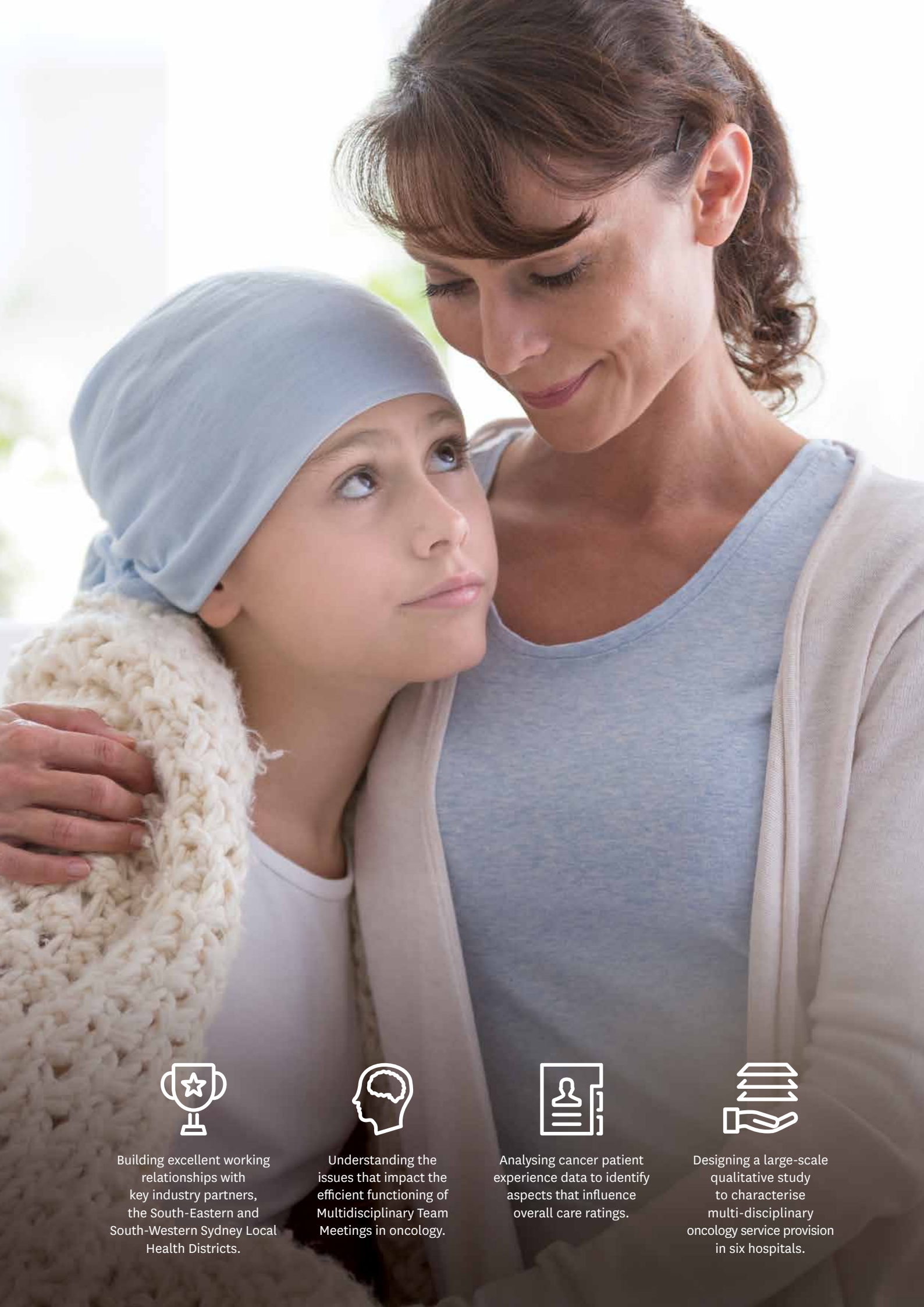
- Professor Jeffrey Braithwaite, AIHI, Macquarie University
- Professor Robyn Ward, AM, University of Sydney
- Professor David Currow, Flinders University
- Professor Geoff Delaney, Liverpool Hospital
- Professor Richard Kefford, AM, Macquarie University
- Professor Ian Olver, AM, University of South Australia
- Professor Jonathan Karnon, The University of Adelaide
- Professor Phil Crowe, University of New South Wales
- Associate Professor Winston Liauw, St George Hospital and Community Health Service
- Professor Johanna Westbrook, AIHI, Macquarie University

It is estimated that 150,000 new cases of cancer will be diagnosed in Australia in 2020. This number is increasing each year, principally because of population growth and changing demography.

Overall Australian cancer survival rates are amongst the best in the world and are incrementally improving, creating a growing cohort who require ongoing support and management.

This growth in demand for services places stresses on our health system. At the same time, the system is dealing with rapid growth in new treatments and treatment strategies for cancer, and with an increased focus on patient experience. To address these challenges, the Centre is working to understand how cancer services are currently delivered. As we proceed, this understanding will inform strategies for improving the adoption of evidence-based practices.

**The Centre is administered by AIHI with a central coordinating team led by Dr Gaston Arnolda** [↗](#)



Building excellent working relationships with key industry partners, the South-Eastern and South-Western Sydney Local Health Districts.



Understanding the issues that impact the efficient functioning of Multidisciplinary Team Meetings in oncology.



Analysing cancer patient experience data to identify aspects that influence overall care ratings.



Designing a large-scale qualitative study to characterise multi-disciplinary oncology service provision in six hospitals.



# Our partners

The Australian Institute of Health Innovation highly values collaboration. Our partners come from a range of sectors including government, industry, health services and research institutions and we engage with the community through clinical trials and advocacy groups. A full list of our national and international collaborative partners can be found on our website at [aihi.mq.edu.au](http://aihi.mq.edu.au)

The Institute would like to thank the following organisations for collaborating on new and continuing research projects during 2018:

- Australian Commission on Safety and Quality in Health Care
- Australian Defence Force
- Australian Genomics Health Alliance
- Australian Research Council
- Bupa Health Foundation Australia
- Cancer Institute NSW
- Cancer Institute NSW Premier's Award
- Children's Cancer Institute Australia
- Children's Health Queensland Hospital and Health Service
- Clinical Excellence Commission
- Cochlear Ltd
- Commonwealth Department of Health
- Food and Agriculture Organization of the United Nations
- Government of South Australia: SA Health
- Government of Western Australia: Department of Health
- Healthdirect Australia
- Independent Hospital Pricing Authority
- Macquarie University
- Motor Neurone Disease Research Institute of Australia
- Murdoch Children's Research Institute
- National Health and Medical Research Council
- New South Wales Kids and Families
- New South Wales Ombudsman
- NSW Ministry of Health
- NSW State Insurance Regulatory Authority
- Research Australia
- Royal North Shore Hospital
- Sax Institute
- St Vincent's Health Australia
- Sydney Children's Hospital Network
- Telethon Institute Population Health Research Network
- Telstra Health
- Townsville Hospital and Health Service
- University of New South Wales
- University of Notre Dame Australia
- University of Sydney
- University of Wollongong



Hospitals



Research organisations



Clinicians



Industry



Health Consumers



Peak bodies



International bodies



Government





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# Our staff

Our Institute continues to grow in size, expertise and diversity. We gain collectively from the heterogeneous professional backgrounds of our staff whether it be medicine, science, engineering or psychology. In 2018, another one of our senior researchers joined the ranks of Associate Professor whilst we have a record breaking 37 students enrolled in higher degrees.

Our staff and visiting academics come from a variety of backgrounds, providing global perspectives in healthcare and a plethora of international delicacies at our regular social fundraisers.

**5**  
Professors

**6**  
Associate Professors

**6**  
Senior Research Fellows

**25**  
Research Fellows

**23**  
Postdoctoral Fellows

**70**  
Professional and other staff

**50**  
External academics

**37**  
HDR Students



Profiles for all our staff are available on the website:  
[aihi.mq.edu.au](http://aihi.mq.edu.au)











# Awards

**ASSOCIATE PROFESSOR  
PETER HIBBERT**

Swiss Patient Safety Foundation, Paper of the Month for Hibbert P, Thomas MJW, Deakin A, Runciman W, Braithwaite J, Lomax S, et al. Are root cause analyses recommendations effective and sustainable? An observational study. *International Journal for Quality in Health Care*. 2018;10.1093/intqhc/mzx181

**ASSOCIATE PROFESSOR  
MELISSA BAYSARI**

Awarded the Branko Cesnik Award for Best Academic and Scientific Paper, Australian Health Informatics Conference, Sydney

**DR ANNE HOGDEN**

Nina Buscombe Award from MND Victoria

**DR BAKI KOCABALLI,  
DR LILLIANA LARANJO AND  
PROFESSOR ENRICO COIERA**

Awarded Best Paper at the 32nd British HCI Conference Belfast, Northern Ireland

**DR KATHLEEN YIN**

Awarded '2018 Next Gen Leader' by International Game Developers Association

**DR RAE-ANNE HARDIE**

Finalist for the BUPA Health Foundation's Emerging Researcher Award

**DR ROBYN CLAY-WILLIAMS**

Resilient Health Care International Prize 2018 (third prize) awarded by the Resilient Health Care Network

**DR TERRY HANNAN, VISITING FELLOW**

Awarded Jon Hilton Award for excellence in primary care informatics, Australian Health Informatics Conference, Sydney

**DR YVONNE TRAN**

Russell Cole Memorial ANZCA Research Award from the Australian and New Zealand College of Anaesthetists to support a highly ranked pain-related research grant

**PROFESSOR JEFFREY BRAITHWAITE**

Awarded Peter Reizenstein Award from the International Society for Quality in Health Care

**HOSSAI GUL**

Top four Finalist for Toptal Global Scholarships for Women Leaders to Change the World

**PAIGE NEWMAN**

Awarded AWS Cloud Credits for Research Program to fund the infrastructure for the "trial2rev" research project



# New board, fellowship and committee appointments

## **ASSOCIATE PROFESSOR ADAM DUNN**

- Computational Health Informatics Program, Boston Children's Hospital – Affiliated Faculty Member
- Department of Primary Care Medicine, University of Malaya – Visiting Associate Professor
- International Workshop on Health Intelligence at the *AAAI Conference on Artificial Intelligence Program Committee*
- *JAMIA Open* – Editorial Board Member
- Macquarie University Academic Senate – Elected Faculty Representative
- Macquarie University Research Fellowship Panel – Co-Chair,
- MQ Research Enrichment Program – Executive Committee Member
- NHMRC Postgraduate Scholarships Peer Review Committee
- Society for Research Synthesis Methods
- *WebConf*, Health on the Web Track Program Committee

## **ASSOCIATE PROFESSOR FARAH MAGRABI**

- 12th Australasian Conference on Health Informatics and Knowledge Management Steering Committee
- AI Working Group, Standards Australia

## **ASSOCIATE PROFESSOR MELISSA BAYSARI**

- NHMRC Health Translation Advisory Committee

## **ASSOCIATE PROFESSOR PETER HIBBERT**

- BMJ-IHI International Forum of Quality and Safety Research Symposium 2018 – Organising committee member
- Central Adelaide Local Health Network Executive Quality & Governance Committee
- Women's and Children's Hospital Adelaide Local Health Network Clinical Safety and Quality Committee

## **ASSOCIATE PROFESSOR REBECCA MITCHELL**

- NSW Child and Young Person Injury Prevention Working Group, NSW Advocate for Children and Young People – Expert Advisor

## **DR ANNIE LAU**

- Health subcommittee of the ACM CHI Conference on Human Factors in Computing Systems 2019 – Associate Chair

## **DR BRÓNA NIC GIOLLA EASPAIG**

- *Australian Community Psychologist Journal* – Associate Editor
- National Committee of the College of Community Psychologists, Australian Psychological Society – Secretary National Committee
- School of Psychology, Charles Sturt University – Adjunct Academic
- School of Rural Health Centre for Rural Health, College of Health and Medicine, University of Tasmania – Adjunct Researcher
- Women & Psychology Interest Group, Australian Psychological Society – National Committee Member

## **DR ELIZABETH AUSTIN**

- Macquarie University Early Career Research Committee

## **DR EMILIE AUTON**

- Workplace Health & Safety Committee, Faculty of Medicine and Health Sciences, Macquarie University
- Faculty of Arts and Social Sciences, UNSW Sydney – Conjoint Lecturer
- Qualitative and Mixed Methods Clinic, Australian Institute of Health Innovation, Macquarie University – Founding Member

**DR MAGDA RABAN**

- *Health Information Management Journal* – Editorial Advisor

**DR MIKAELA JORGENSEN**

- Macquarie University Faculty of Medicine and Health Sciences Low-risk Ethics Subcommittee
- NSW Australian Association of Gerontology Executive Committee

**DR MIRELA PRGOMET**

- *Health Information Management Journal* – Editorial Board

**DR REIDAR LYSTAD**

- 2018 Sports Medicine Australia Conference Scientific Organising Committee
- *Injury Epidemiology Journal* – Editorial Board

**DR ROBYN CLAY-WILLIAMS**

- Bureau of Health Information Patient Safety Measurement Advisory Group

**DR VALENTINA LICHTNER**

- EU Marie Skłodowska-Curie Individual Global Fellowship – Fellow

**DR WU YI ZHENG**

- Macquarie University Faculty of Medicine and Health Sciences Postgraduate Research Fund Review Committee
- St Vincent's Health Australia Research Award Judging Panel – Reviewer

**HOSSAI GUL**

- Macquarie University Faculty of Medicine and Health Sciences Student Experience Committee
- Future STEMM Leaders Researcher Development Program, Macquarie University – Program Coordinator
- TEDx Macquarie University – Director

**PROFESSOR ANDREW GEORGIU**

- Macquarie University Aged and Ageing Research Network Steering Committee
- NHMRC Centres of Research Excellence Grant Review Working Committee 2018

**PROFESSOR ENRICO COIERA**

- Australian Academy of Health and Medical Sciences – Fellow

**PROFESSOR FRANCES RAPPORT**

- NHMRC Centre of Research Excellence in Melanoma Executive Committee Board Member
- Swansea University Medical School Honorary Professor of Qualitative Health Research
- MRFF Development Committee, MRFF Round Table Consultation regarding translational and implementation science – Invited participant
- NHMRC Clinical Trials and Cohort Studies Board – Spokesperson and Associate Board Member

**PROFESSOR JEFFREY BRAITHWAITE**

- 2018 Organizational Behaviour in Health Care Conference, Montreal, Canada, 2018 – Member of the Scientific Committee
- Austrian Health Academy, Vienna, Austria, 2018 – Scientific Advisor
- Deutsche Forschungsgemeinschaft DFG (German Research Foundation) Review Panel for a Research Unit in the Area of Public Health, Bonn, Germany, 2018 – Panel Member
- European Commission, Joint Research Commission for The European Commission Initiative on Colorectal Cancer, Italy, 2018 – International Expert
- Institute of Health & Society, Newcastle University, United Kingdom, 2018-2021 – Advisory Board Member
- NHMRC Research Committee – Reappointed
- Technical Advisory Committee TAG to the Regional Director, Eastern Mediterranean Region of the World Health Organization, 2019-2021 – Technical Advisor
- TOPPFORSK Program in Resilient Health Care, Universitetet Stavanger, Norway, 2018 – Chair Scientific Advisory Board

**PROFESSOR JOHANNA WESTBROOK**

- Australian Academy of Technology and Engineering – Fellow



# Institute engagement

## AIHI SEMINAR SERIES

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The AIHI Seminar Series provides a monthly forum for the sharing of ideas, new research and calls to action that invigorate debate and contribute to improving the health system in Australia and internationally. Institute researchers and visiting academics present their work at these public events which are attended by staff, external academics, university students, clinicians and industry representatives. We are pleased to present the most popular of the 30 sessions held during 2018. A list of all our seminars can be found on the AIHI website. [↗](#)

### **DEVELOPING POSITIVE CARE CULTURES THROUGH APPRECIATIVE INQUIRY**

**Speaker: Professor Belinda Dewar**

Professor of Practice Improvement at the Institute of Health Care Policy and Practice at the University of the West of Scotland and the Director of LIFE (Learning and Innovating from Everyday Excellence).

This seminar highlighted the improvements in understanding and outcomes of a number of projects that used creative methodologies to achieve consistent quality service in health and social care in the UK.

### **DIAGNOSTIC ERROR IN MEDICINE: CAN WE TALK?**

**Speaker: Dr Carmel Crock**

Director, Emergency Department at the Royal Victorian Eye and Ear Hospital

Diagnosis is one of the most complex and challenging tasks facing clinicians with errors being difficult to define, measure and study. Dr Crock examined the emerging field of diagnostic safety.

### **HEALTHY PEOPLE, HEALTHY SYSTEMS**

**Speaker: Alison Verhoeven**

CEO, Australian Healthcare and Hospitals Association (AHHA)

Utilising her broad experience in health, education, corporate governance and communications, Ms Verhoeven explored the proposals put forward in the AHHA's blueprint for health reform.

### **ENGAGING PATIENTS IN NEW WAYS**

**Speaker: Professor David Bates**

Chief, Division of General Internal Medicine, Brigham and Women's Hospital, Boston, USA

Professor Bates spoke about how patient engagement is a potentially powerful way to improve safety and quality. He outlined the Patient SatisfActive model, its impacts on outcome and evaluated the impact in intensive care and oncology.



# Outreach events

## **Consumers enhance diagnostic informatics**

Workshop with consumers and researchers

## **Artificial intelligence in healthcare**

Workshop with academia, industry, clinicians and consumers

## **Reducing waste and low value care**

Meeting of researchers in health system sustainability

## **Alternative models of care Delphi Study**

Webinar of consumers, health service professionals and ministry officials

## **Designing evidence informed and cost effective primary health services**

Webinar for primary health networks

## **Crowd Wisdom survey**

Event for health system workers at the International Hospital Federation World Hospital Conference

## **Community care and social engagement**

Stakeholder forum with community aged care clients and staff

## **Digital Scribe clinical input**

Observations and workshops with GPs on AI in primary care settings

## **Health system sustainability**

Meeting of NHMRC Partnership Centre research and systems based investigators

## **Functional Resonance Analysis**

Workshop for clinicians, risk and quality managers and researchers

## **Delivering resilient healthcare**

Workshop for international clinicians and leaders in patient safety

## **AIHI Seminar Series**

Free seminars with expert speakers held monthly [↗](#)

# Investing in researchers of the future

AIHI's capacity-building postgraduate program is highly regarded. The program draws on the expertise and experience of an internationally recognised pool of researchers to supervise students across a broad range of disciplines including computer science, medical sciences, health services research, mathematics, law, business, biostatistics, psychology, and engineering. All postgraduate candidates work in a supportive environment with two or more experienced supervisors and are provided opportunities to interact with researchers and students across AIHI and Macquarie University.

Postgraduate candidates can pursue several qualifications including Master of Research (MRes), Master of Philosophy (MPhil), and Doctor of Philosophy (PhD). Our postgraduate programs place a strong emphasis on academic and professional development. Past doctoral candidates have progressed to senior roles in academia, health services and industry both locally and internationally.

## 2018 CALENDAR YEAR



3

PhD completions



3

MRes completions



1

MPhil graduate



37

Total number of students





## HDR CASE STUDY 1



### **EXPLORING MORE THAN GARDEN VARIETY BIOSTATISTICS**

**Scott R Walter**

After training as a biostatistician, I came to AIHI to research the effects of interruptions and multitasking during clinical work in hospitals. The quantitative study of observed behaviour was quite different to garden-variety biostatistics and was full of interesting complexities, but the statistical methods used in the literature often did not acknowledge that complexity. When it came time to define the scope of my PhD, it seemed obvious to focus on how we can do a better job of quantitatively studying clinical work, starting with new ways of conceptualising

the clinical work process, and bringing in some statistical techniques that hadn't been applied in this context. I spent some time observing emergency doctors – a learning experience in itself – in order to test my ideas in the field. A key finding from analysing my data was that most interruptions were related to timely exchange of clinical information, and while such interruptions could be disruptive, they were essential for the functioning of the department. Since graduating I have been able to continue working in this area. There is still much to understand, but each additional piece of the puzzle provides a base from which to make clinical work safer and more effective.

## HDR CASE STUDY 2



Scott R Walter



Chiara Pomare

### SEEKING A SYSTEMS PERSPECTIVE

#### Chiara Pomare

After studying a Bachelor of Psychology (Hons) I came to AIHI to gain a systems perspective on my research interests in the mental health sector. My Master of Research project examined how health professionals working in integrated mental healthcare collaborate when they experience professional uncertainties. The study included semi-structured interviews and a social network survey. As I researched the varieties of uncertainty, I learned that in the research world the greatest uncertainty is in publications. *For me, this meant having three papers accepted the day before, the day of, and*

*day after I boarded a plane for a four-week holiday! Luckily, I have a very supportive supervisory team who helped me finalise the submissions.*

I'm now a PhD student within the Centre for Healthcare Resilience and Implementation Science, where I also work as a research assistant. My PhD explores the influence of hospital redevelopment on the organisation, staff, and patients – with a particular focus on the role of social processes in a changing physical hospital environment. The study is longitudinal and includes semi-structured interviews, network surveys, observations, and pre-existing hospital data.



# AIHI grants awarded or under management in 2018

Title	Funding Source	Investigators	Total awarded
<b>NHMRC</b>			
Creating safe, effective systems of care: the translational challenge	NHMRC	Braithwaite J Westbrook J Coiera E Runciman W Day R Hillman K	<b>\$10,855,710.00</b>
NHMRC Partnership Centre in Health Systems Sustainability	NHMRC	Braithwaite J Coiera E Westbrook J Glasziou P Karnon J Scott A Buchbinder R	<b>\$5,250,000.00</b>
Centre of Research Excellence in Digital Health	NHMRC	Coiera E Glasziou P Runciman W Hansen D Liaw S Magrabi F Sintchenko V Verspoor K Gallego Luxan B Lau A	<b>\$2,498,649.00</b>
Centre of Research Excellence in Implementation Science in Oncology (CRE-ISO)	NHMRC	Braithwaite J Ward R Currow D Delaney G Kefford R Olver I Karnon J Liauw W Westbrook J	<b>\$2,495,783.00</b>
CareTrack Aged: appropriate care delivered to Australians living in residential aged care	NHMRC	Braithwaite J Cameron I Kitson A Reed R Georgiou A Gray L	<b>\$1,157,722.00</b>

Title	Funding Source	Investigators	Total awarded
Delivering safe and effective test result communication, management and follow-up <b>Partners:</b> South Eastern Area Laboratory Service, Australian Commission on Safety and Quality in Health Care	NHMRC	Georgiou A Westbrook J Greenfield D Horvath A Wakefield D Li L Hillman K	<b>\$883,358.00</b>
Delivering safe and effective test result communication, management and follow-up <b>Partner funds:</b> South Eastern Area Laboratory Service	NHMRC	Georgiou A Westbrook J Greenfield D Horvath A Wakefield D Li L Hillman K	<b>\$250,001.00</b>
Creating a culture of safety and respect: a controlled, mixed methods study of the effectiveness of a behavioural accountability intervention to reduce unprofessional behaviours <b>Partner:</b> St Vincent's Health Australia	NHMRC	Westbrook J Braithwaite J Day R Middleton S Scott D Rapport F Mitchell R Baysari M Li L Taylor N	<b>\$875,978.00</b>
Creating a culture of safety and respect: a controlled, mixed methods study of the effectiveness of a behavioural accountability intervention to reduce unprofessional behaviours <b>Partner funds:</b> St Vincent's Health Australia	NHMRC	Westbrook J Braithwaite J Day R Middleton S Scott D Rapport F Mitchell R Baysari M Li L Taylor N	<b>\$350,000.00</b>
Delivering safe and effective care for children in hospital with eHealth systems <b>Partners:</b> Sydney Children's Hospitals Network, eHealth NSW, NSW Office of Kids and Families	NHMRC	Westbrook J Georgiou A Day R O'Brien T Karnon J Dalla-Pozza L Cowell C Li L Baysari M Ambler G	<b>\$632,805.00</b>

Title	Funding Source	Investigators	Total awarded
Delivering safe and effective care for children in hospital with eHealth systems <b>Partner funds:</b> Sydney Children's Hospitals Network	NHMRC	Westbrook J Georgiou A Day R O'Brien T Karnon J Dalla-Pozza L Cowell C Li L Baysari M Ambler G	<b>\$200,000.00</b>
Delivering safe and effective care for children in hospital with eHealth systems <b>Partner funds:</b> eHealth NSW	NHMRC	Westbrook J Georgiou A Day R O'Brien T Karnon J Dalla-Pozza L Cowell C Li L Baysari M Ambler G	<b>\$150,000.00</b>
Delivering safe and effective care for children in hospital with eHealth systems <b>Partner funds:</b> NSW Office of Kids and Families	NHMRC	Westbrook J Georgiou A Day R O'Brien T Karnon J Dalla-Pozza L Cowell C Li L Baysari M Ambler G	<b>\$100,000.00</b>
Optimising computerised decision support to transform medication safety and reduce prescriber burden <b>Partners:</b> eHealth NSW, eHealth Qld	NHMRC	Baysari M Li L Westbrook J Day R Hilmer S	<b>\$325,546.00</b>
Optimising computerised decision support to transform medication safety and reduce prescriber burden <b>Partner funds:</b> eHealth NSW	NHMRC	Baysari M Li L Westbrook J Day R Hilmer S	<b>\$400,000.00</b>
Optimising computerised decision support to transform medication safety and reduce prescriber burden <b>Partner funds:</b> eHealth Qld	NHMRC	Baysari M Li L Westbrook J Day R Hilmer S	<b>\$105,000.00</b>
Enabling personalised cohort studies from large repositories of clinical practice data	NHMRC	Gallego Luxan B Shah N Verspoor K Liaw S	<b>\$520,968.00</b>



Title	Funding Source	Investigators	Total awarded
New methods for tracking the influence and geospatial clustering of vaccine misinformation	NHMRC	Dunn A Leask J	<b>\$476,648.00</b>
Optimising eHealth systems to improve medication safety and patient outcomes	NHMRC	Raban M	<b>\$347,952.00</b>
Protecting the public from emerging infectious diseases	NHMRC	Sorrell T Sintchenko V Cheng A Gilbert G Holmes E Howden B Smith D Coiera E Iredell J Jones C	<b>\$87,004.00</b>
Preventing chronic disease in patients with low health literacy using e-health and teamwork in primary health care	NHMRC	Harris M Stocks N Nutbeam D Zwar N Karnon J Denney Wilson E Noakes M Liaw S Lau A	<b>\$79,564.00</b>
<b>Other</b>			
The nature and potential adverse consequences of interruptions and multi-tasking in safety critical work environments	ARC	Westbrook J Braithwaite J Dunsmuir W	<b>\$462,628.00</b>
Development of national guidance for classifying health IT related incidents	Australian Commission on Safety and Quality in Health Care	Magrabi F Baysari M	<b>\$34,125.00</b>
An evaluation of the literature on assessing safety and quality culture in an organisation	Australian Commission on Safety and Quality in Health Care	Hogden A Ellis L Churruca K Bierbaum M	<b>\$23,095.00</b>
Health implementation research strategy/Towards understanding complexity	Australian Genomics Health Alliance	Braithwaite J Long J Taylor N	<b>\$365,868.00</b>
McKenzie's Mission	Australian Genomics Health Alliance	Braithwaite J Long J Best S	<b>\$250,000.00</b>
From bedside to the bench: Bringing Macquarie University Hospital data to researchers	Australian National Data Service	Tsafnat G	<b>\$160,000.00</b>

Title	Funding Source	Investigators	Total awarded
NHMRC Partnership Centre in Health Systems Sustainability - Partner Funding	BUPA	Braithwaite J Coiera E Westbrook J Glasziou P Scott A Buchbinder R	<b>\$2,000,000.00</b>
The impact of electronic clinical systems on medication safety and workload in oncology	Cancer Institute NSW	Westbrook J Baysari M Mumford V Li L	<b>\$160,000.00</b>
NSW Premier's Awards for Excellence in Cancer Research: Excellence in Translational Research	Cancer Institute NSW	Taylor N Long J Debono D Braithwaite J Chin M Salisbury E Williams R Potter M O'Neil S Eykmann E	<b>\$20,000.00</b>
CMCRC Supervisors Research Support Allowance – Gallego Luxan, B	Capital Markets Cooperative Research Centre	Gallego Luxan B	<b>\$10,000.00</b>
Evaluation of a hospital based optometry clinic model	Centre for Eyecare UNSW	Blakely B Long J Clay-Williams R Braithwaite J	<b>\$38,027.00</b>
Paediatric Precision Oncology Implementation Science	Children's Cancer Institute Australia	Rappart F Braithwaite J Long J O'Brien T Tyrrell V	<b>\$293,840.00</b>
Analysis and optimization of the St. John's Hospital sepsis alert pilot	Clinical Excellence Commission	Li L Westbrook J	<b>\$47,060.00</b>
Behavioural and Attitudinal Responses to Cochlear Implantation in Australia and the UK	Cochlear Ltd	Rappart F Hogden A	<b>\$160,000.00</b>
Comparison of outcomes with hearing aids and cochlear implants in adults with moderately severe to profound bilateral sensorineural hearing loss (COACH study): Qualitative arm.	Cochlear Ltd	Rappart F Hogden A Boisvert I	<b>\$72,480.00</b>
Enhancing patient outcomes through evaluation of the appropriateness and quality use of pathology in general practice	Commonwealth Department of Health	Georgiou A Westbrook J Li L Pont L Pearce C Reinhart N	<b>\$522,824.00</b>

Title	Funding Source	Investigators	Total awarded
Developments that support innovation in aged care: Ageing well - A social participation and engagement tool to enhance consumer choice and the delivery of quality, person-centred community aged care services.	Commonwealth Department of Health	Georgiou A Westbrook J Jorgensen M Siette J	<b>\$265,976.00</b>
Evaluating social engagement services for older adults in community care: Role of social networks in cognitive decline	Dementia Australia Research Foundation Limited	Siette J	<b>\$50,000.00</b>
Evaluation of Community Connections Program	Enrich Living Services	Siette J	<b>\$34,595.00</b>
MindSEIS: Resilience, Mindfulness and Medication Safety with Electronic Systems	European Commission H2020 MSCA International Fellowship	Lichtner V Westbrook J	<b>\$53,346.00</b>
Evaluation of My Health Record and Healthdirect Australia after hours GP helpline	Healthdirect	Westbrook J Baysari M Koyama A Nguyen A Van Dort B	<b>\$149,181.00</b>
Research on approaches for clinical governance of consumer digital health	Healthdirect	Magrabi F Coiera E	<b>\$54,657.00</b>
Health System Sustainability	Independent Hospital Pricing Authority	Braithwaite J	<b>\$240,103.00</b>
WOMBAT iOS development (DVCR and MQ IT funded)	Macquarie University	Westbrook J Li L	<b>\$100,000.00</b>
Impact of chronic illness and injury on school performance	Macquarie University	Mitchell R	<b>\$77,639.00</b>
WOMBAT iOS development (AIHI Funded)	Macquarie University	Westbrook J	<b>\$70,000.00</b>
Macquarie MINDS: Monitoring of injury and psychosocial health outcomes, career trajectories and continuing education, LiveD experiences and Social connectedness	Macquarie University	Lystad R Peters L Johnstone M Ellis L	<b>\$49,994.00</b>
Preventing patient harm in hospitals: automatic real-time detection of adverse drug events using datasets from electronic clinical information systems	Macquarie University	Li L	<b>\$49,806.00</b>
iConnect: Capturing social interactions using wearable technology in residential aged care	Macquarie University	Siette J	<b>\$43,875.00</b>
Personalised anticoagulant therapy for patients with acute coronary syndrome	Macquarie University	Wendling T Gallego Luxan B Coiera E Runciman W	<b>\$40,000.00</b>
The lived experience of post-surgical following resective surgery for refractory epilepsy: a phenomenological study	Macquarie University	Shih P	<b>\$25,000.00</b>




Title	Funding Source	Investigators	Total awarded
Better Evidence for earlier identification and Surgical intervention for RefracTory epilepsy (The BEST Study): A one year pilot study	Macquarie University	Rapport F Mitchell R Bleasel A Nikpour A Vagholkar S Herkes G	<b>\$20,008.00</b>
Trialling the revised Macquarie surgical innovation identification tool (MSIIT) in five Australian Hospitals: Phase One	Macquarie University	Blakely B	<b>\$19,980.00</b>
Understanding the impact of dementia on rehabilitation following hip fractures to improve health outcome for older people	Macquarie University	Mitchell R	<b>\$19,974.00</b>
Patient work conducted by individuals with type 2 diabetes and chronic co-morbidities: a mixed-method, multi-staged, observational study	Macquarie University	Lau A	<b>\$19,942.00</b>
Investigating a new and innovative approach to using the Work Observation Method By Activity Timing (WOMBAT) tool: a proof of concept study in paediatric oncology	Macquarie University	Prgomet M	<b>\$14,000.00</b>
Establishing the role of social networks in older adults in residential aged care	Macquarie University	Siette J	<b>\$10,000.00</b>
Patient work conducted by individuals with type 2 diabetes and chronic co-morbidities: a mixed-method, multi-staged, observational study	Macquarie University	Lau A	<b>\$10,000.00</b>
A framework for evaluating and improving the efficiency of the systematic review endeavour	Macquarie University	Bashir R	<b>\$4,652.00</b>
NHMRC Partnership Centre in Health Systems Sustainability - Partner funding	NSW Health	Braithwaite J Coiera E Westbrook J Glasziou P Karnon J Scott A Buchbinder R	<b>\$1,000,000.00</b>
Using a life course approach to examine the influence of individual and psychosocial characteristics on individual trajectories though the health and aged care systems	NSW Health	Mitchell R	<b>\$360,939.00</b>
Productive safety in the Emergency Department (ED): developing ED safety capacity when responding to high patient demand and unexpected events	NSW Health	Clay-Williams R	<b>\$360,929.00</b>
Redesigning patient experience in health service navigation using digital technology	NSW Health	Lau A	<b>\$360,541.00</b>
Evaluation of the Delirium Clinical Care Standard	NSW Health	Mumford V	<b>\$293,506.00</b>
Review of the Child Death Register	Ombudsman New South Wales	Mitchell R	<b>\$15,045.00</b>
Scoping barriers and finding solutions to research knowledge translation and implementation into the Australian health care system	Research Australia	Zurynski Y Braithwaite J Holt J	<b>\$25,272.00</b>

Title	Funding Source	Investigators	Total awarded
Person-centred care evaluation project	St Vincent's Health Australia	Rapport F Hibbert P Baysari M Braithwaite J Long J	<b>\$67,513.00</b>
Independent file review to monitor the minor injury definition and threshold in the new CTP scheme	State Insurance Regulatory Authority	Mitchell R Braithwaite J Hibbert P	<b>\$173,997.00</b>
IT Safety at Telstra Health	Telstra Health	Magrabi F	<b>\$37,188.00</b>
IT safety workshops	Telstra Health	Magrabi F	<b>\$16,938.00</b>
Evaluation of a family support collaborative using a social network approach	The University of New South Wales	Long J	<b>\$15,000.00</b>
Townsville Hospital and Health Services SPUR Project	Townsville Hospital and Health Service	Clay-Williams R Lane P Johnson A	<b>\$40,000.00</b>
Evaluation of a peer support program at the Townsville Hospital	Townsville Hospital and Health Service	Clay-Williams R Austin E Ellis L Blakely B Lane P	<b>\$28,977.00</b>
Improving outcomes from high risk surgery: patient-centred advanced care planning	Townsville Hospital and Health Service	Clay-Williams R Senthuran S Lane P	<b>\$20,000.00</b>
Systematic Review Automation Pipeline Pilot Study	U.S. National Institute of Environmental Health Sciences (NIEHS)	Tsafnat G	<b>\$80,256.00</b>
Person, tumor and system-focussed knowledge to drive better outcomes in melanoma	University of Sydney	Braithwaite J Rapport F	<b>\$186,730.00</b>
Trauma Journey Day of Difference	University of Sydney	Mitchell R	<b>\$50,085.00</b>
Perceived improvement in quality of care	University of Wollongong	Mitchell R Wadolowski M Goodenough B Watts J	<b>\$69,614.00</b>
PSRACS participation in the CareTrack Aged research, a NHMRC-funded Project Grant	Victoria Department of Health and Human Services	Braithwaite J Hibbert P Wiles L	<b>\$357,603.00</b>
NHMRC Partnership Centre in Health System Sustainability - Partner Funds	WA Health	Braithwaite J Coiera E Westbrook J Glasziou P Scott A Karnon J Buchbinder R	<b>\$500,000.00</b>



# Engage with us

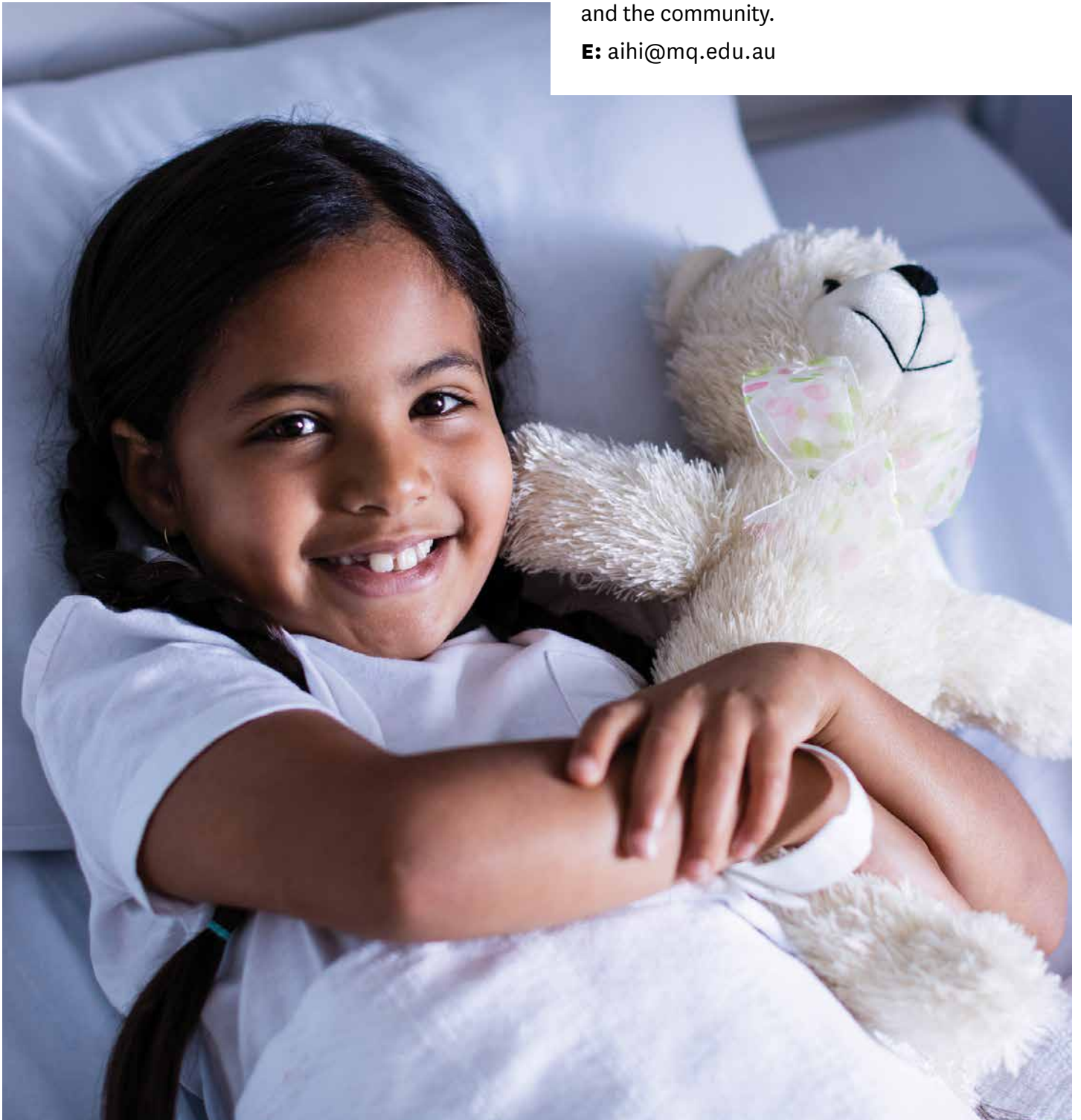
We welcome health system advocates, research scientists and industry as partners in our efforts to develop innovative solutions and ensure healthcare system efficiency, effectiveness and sustainability. Keep up to date with our news or attend an event – you will find all the information on our website [aihi.mq.edu.au](https://aihi.mq.edu.au) 



# Join us

Work or study with us and make a difference to the Australian health system. We conduct world-class research with national and international research communities, governments, policy-makers, providers of health services, clinicians, patients and the community.

**E:** [aihi@mq.edu.au](mailto:aihi@mq.edu.au)



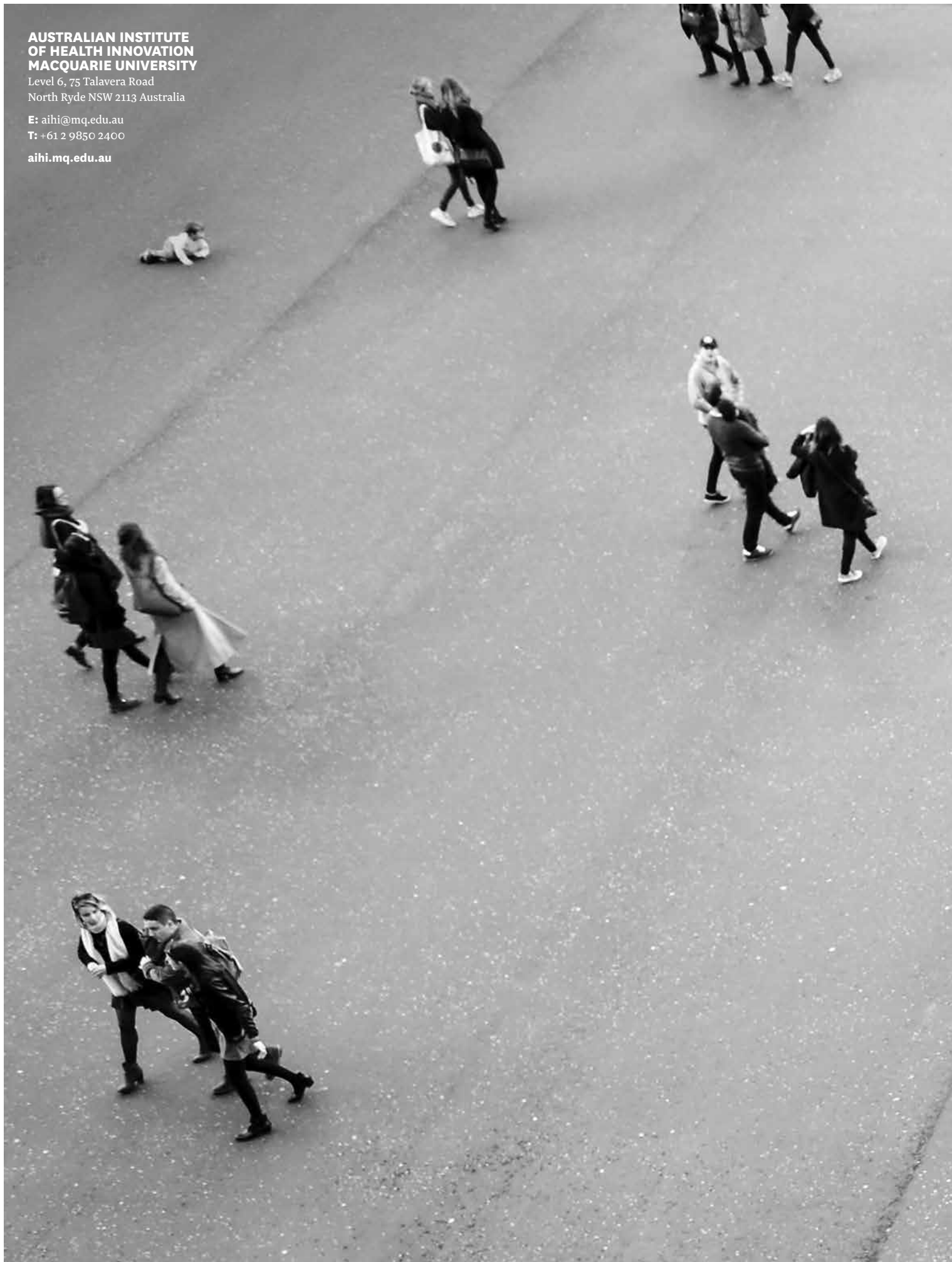
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