Study with us to help improve the Australian Health System

AUSTRALIAN INSTITUTE OF HEALTH INNOVATION

WHAT WE OFFER

Do you have a background in science, engineering, health, psychology, or economics?

Study with us and make a difference to the Australian health system.

Current scholarship opportunities

1. MRes/PhD Scholarship in Health Informatics, Quality and Safety
2. MRes/PhD Scholarship - Paediatrics
3. PhD Scholarship - Human Factors and Resilience Stream
4. PhD Scholarship - Genomics Implementation 1
5. PhD Scholarship - Genomics Implementation 2
6. MRes2/PhD Scholarship - Digital Health for Patients and Healthcare Consumers

WHO WE ARE

The Australian Institute of Health Innovation (AIHI) conducts world-class research with national and international research communities, governments, policymakers, providers of health services, managers, clinicians, patients and the community. Our work underpins health reforms and systems improvement, providing new tools, perspectives and evidence to help stakeholders who are interested in making the health system more effective, efficient and productive. Our overarching aim is to produce new, high-quality research evidence to support change, prevention and improvement. AIHI’s research aligns with Macquarie University’s Research Framework World-Leading Research; World-Changing Impact.
### Centre for Healthcare Resilience and Implementation Science (CHRIS)

#### Complexity Science
1. Evaluating approaches to the implementation of genomic sequencing into Australian healthcare organisations: a theory-based process evaluation
2. Complexity science applied to healthcare
3. Network analysis uncovering relationships in health systems.

Contact: [jeffrey.braithwaite@mq.edu.au](mailto:jeffrey.braithwaite@mq.edu.au), [louise.ellis@mq.edu.au](mailto:louise.ellis@mq.edu.au), [janet.long@mq.edu.au](mailto:janet.long@mq.edu.au)

#### Health Outcomes
4. Identifying causal factors for complications of surgical and medical care
5. Concussion and suicide
6. Epidemiology of injuries in Olympic combat sports
7. Epidemiology of injuries in karate

Contact: [r.mitchell@mq.edu.au](mailto:r.mitchell@mq.edu.au)

#### Human Factors and Resilience
8. Improving productive safety in emergency departments

Contact: [robyn.claywilliams@mq.edu.au](mailto:robyn.claywilliams@mq.edu.au)

### Centre for Health Informatics (CHI)

#### Artificial Intelligence (AI) in Medicine
1. Clinical decision making needs and patterns
2. Communicating with AIs - use cases, needs and design

Contact: [enrico.coiera@mq.edu.au](mailto:enrico.coiera@mq.edu.au)

#### Patient Safety Informatics
1. Patient safety risks of AI
2. Engineering safe AI for clinicians and consumers

Contact: [farah.magrabi@mq.edu.au](mailto:farah.magrabi@mq.edu.au)

#### Health Analytics
1. Extracting patient cohorts in SQL health databases

Contact: [thierry.wendling@mq.edu.au](mailto:thierry.wendling@mq.edu.au)

#### Consumer Informatics
2. Understanding ‘work’ from patient and consumer perspectives
3. Artificial intelligence for patients and consumers
4. Surgical informatics for patients and consumers

Contact: [annie.lau@mq.edu.au](mailto:annie.lau@mq.edu.au)

#### Computable Evidence Lab (Decision Support)
5. Clinical question asking systems to pre-empt evidence based answers

Contact: [guy.tsafnat@mq.edu.au](mailto:guy.tsafnat@mq.edu.au)

#### Evidence Surveillance
6. Visualising online communities on Twitter based on geo-location information
7. Performing sentiment analysis on online media using machine learning algorithms
8. Investigating adult immunisation in immigrants and refugees in New South Wales.

Contact: [didi.surian@mq.edu.au](mailto:didi.surian@mq.edu.au)
## CENTRE FOR HEALTH SYSTEMS AND SAFETY RESEARCH (CHSSR)

### Diagnostic informatics

1. The quality use of pathology services in General Practice
2. Laboratory testing in hospitals
3. Delivering safe and effective test result communication, management and follow-up

Contact: andrew.georgiou@mq.edu.au

### Electronic decision support and human factors in healthcare/medication safety and eHealth

4. Optimising design of computerised decision support for prescribers

Contact: melissa.baysari@mq.edu.au

### Medication safety and eHealth

5. Investigating the potential adverse consequences of interruptions and multi-tasking in safety critical work environments
6. Delivering safe and effective care for children with eHealth systems
7. Investigating the effectiveness of computerised alerts for prescribers

Contact: johanna.westbrook@mq.edu.au

### Safety and integration of aged and community care

10. Delivering care and services to ageing populations
11. Incident reporting in community and residential aged care
12. Social network assessment tools for older adults
13. Social engagement of older Australians and the use of community care services

Contact: johanna.westbrook@mq.edu.au

### Complex analyses of electronic health record linkage data

14. Automatic detection of adverse drug events
15. Developing an algorithm for detecting adverse drug events

Contact: ling.li@mq.edu.au
### ABOUT US

#### AIHI: 2016 AT A GLANCE

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#### OUR DIRECTORS

L to R: Professor Jeffrey Braithwaite Director CHRIS & Founding Director AIHI, Professor Johanna Westbrook Director CHSSR, Professor Enrico Coiera Director CHI

#### CONTACT US

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- **General enquiries**
  aihi@mq.edu.au

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  aihi.hdr@mq.edu.au

- **Website**
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### CENTRE FOR HEALTHCARE RESILIENCE AND IMPLEMENTATION SCIENCE (CHRIS)

- Appropriateness of care
- Complexity science
- Health outcomes
- Human factors and resilience
- Implementation science
- International health reform
- Sustainable health systems

**Cross cutting global themes:** Patient safety; Improvement studies; Multi-disciplinary teamwork; Behaviour change.

### CENTRE FOR HEALTH INFORMATICS (CHI)

- E-health
- Artificial intelligence (AI) in medicine
- Patient safety informatics
- Health analytics
- Consumer informatics
- Computable evidence lab (decision support)
- Evidence surveillance

### CENTRE FOR HEALTH SYSTEMS AND SAFETY RESEARCH (CHSSR)

- Diagnostic informatics
- Electronic decision support and human factors in healthcare
- Medication safety and eHealth
- Work innovation, communication and eHealth
- Safety and integration of aged and community care
- Primary care safety and digital health