

*Swinburne Research Institutes*  
*Iverson Health Innovation Research Institute*  
*Themes for Interdisciplinary Seed Grant Funding*



1. **Innovative Health Technologies**
2. **Citizen centric health care**
3. **Empowering citizens in health using a flipped healthcare model**

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## 1. **Innovative Health Technologies**

The overarching vision of the Institute is to identify, understand and solve real-world health challenges **across the human lifespan**. Our focus is broad and may include investigations in: mental health, acute and chronic disease, developmental and degenerative conditions, ageing and disability. Using co-design processes involving clients, carers, clinicians, bioengineers, data scientists and researchers we aim to improve diagnosis, treatment and outcomes, enhance quality of life and develop health care efficiencies. Projects may involve investigations relating to:

- Ageing well
- Understanding and treating serious mental illness
- Understanding and treating chronic disease
- Enhancing cognitive performance
- Bioengineering solutions (including materials, devices, robotics)
- Personal health monitors

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## 2. **Citizen centric health care**

With the development and utilisation of personal health monitors, establishment of large clinical data repositories, advances in imaging and genetic sequencing and digitisation of scientific information there has occurred a burgeoning of health-related data. The challenge remains to draw these data together and develop a paradigm of citizen centric health care to understand health risks, facilitate personalised treatment and reduce or prevent duplication of care. Projects may involve:

- Health 4.0
- Digital health (including mHealth, virtual health, analytics)
- Next generation digital health records
- Using computer learning to analyse, understand and optimise health care delivery
- Remote diagnostics
- Analysis of large physiological data sets
- Implementing and evaluating E-health interventions
- Development of advanced personal health monitors

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## 3. **Empowering citizens in health using a flipped healthcare model**

The ageing population coupled with the increased burden of chronic disease has placed significant strain on our existing healthcare system. While hospitals remain the best port of call for trauma and acute and serious illness in many situations a flipped healthcare model may be more appropriate, effective and efficient. Projects may involve:

- Developing relevant and appropriate health communication technologies
- Supportive care interventions
- Advances in health education and health promotion
- Implementing and evaluating flipped healthcare models