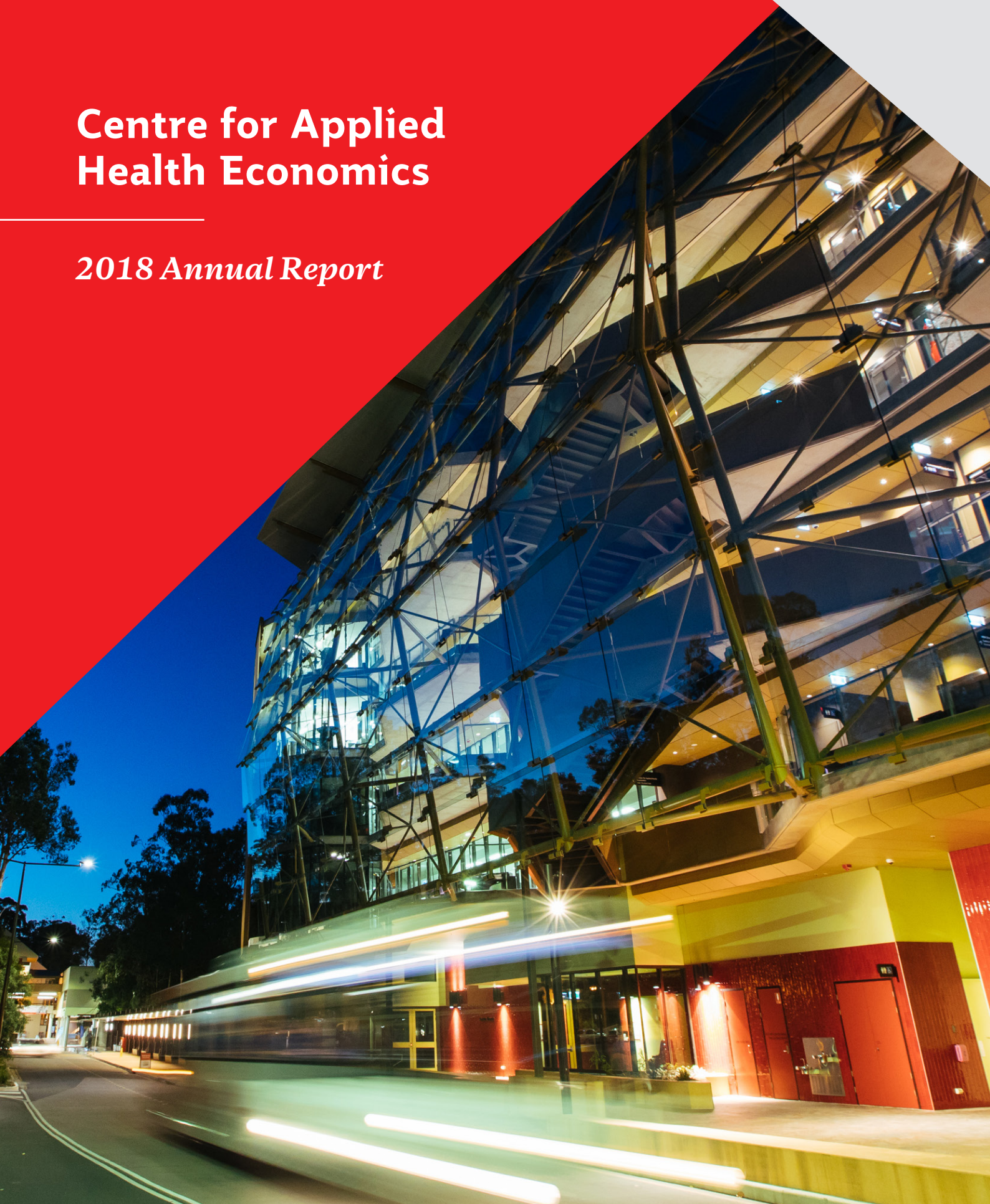


Centre for Applied Health Economics

2018 Annual Report





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Executive summary

At the forefront of an evolving healthcare system, health economists, health services researchers and biostatisticians at the Centre for Applied Health Economics (CAHE) are conducting multi-disciplinary research to deliver leading advice, with significant impact on policy.

CAHE is a nationally and internationally renowned research entity dedicated to producing evidence for health policy and practice towards improving health outcomes for all people. World class multi-disciplinary research from the Centre delivers economic and health benefits through applying innovative methods and analysis, providing the catalyst for solutions to complex problems. We are well-placed to achieve greater research outputs and impact, enabling translation to address real world problems in health and quality of life globally.

Director's report



Professor Paul Scuffham

Our first ten years as a Centre have produced a leading Centre in the field of applied health economics, driving safe, effective and efficient healthcare solutions that are responsive to consumer needs.

This inaugural Annual Report is a milestone in the development of the Centre. It comes on the back of a timely review of the Centre to consider our progress and successes to date, strengths, the opportunities and the future we wish to create.

We are therefore pleased to produce a report that demonstrates our impact, expertise and the breadth of our research to date. Together with industry partners our economic evaluation, health technology assessment work and research translation efforts have continued to significantly influence high level policy decisions and practice in health services.

The Centre has several programs of research in health economics, including health technology assessment for the Australian Government; multiple research grants with national bodies (including the National Health and Medical Research Council (NHMRC), Australian Research Council (ARC) and Emergency Medicine Foundation (EMF)); and has research programs around preference elicitation techniques such as Discrete Choice Experiments (DCEs); priority-setting, such as multi-criteria decision analysis (MCDA); and other applied technical fields, including the Expected Value of Perfect Information (EVPI).

Our focus continues to be on making a strong contribution to the science of health economics and data sciences; strengthening our focus on evaluation of policies and interventions to maximise health outcomes; growing the leadership cohort of the Centre; and developing and strengthening international and national collaborations.

As a reflection of the strength of the CAHE's contribution, our research program was assessed in the 2018 Excellence in Research for Australia (ERA) evaluation as delivering high impact. CAHE's research was ranked at world standard in the field of Applied Economics (1402), reflecting the volume of high quality research undertaken by the team.

The Centre is situated at the Nathan campus, within the School of Medicine, with strong research links to the Menzies Health Institute Queensland (MHIQ). This linkage provides the Centre with direct access to clinical and health management professionals from a wide range of disciplines.

Although fully self-funded, we are fortunate to have the full support of Griffith University and enjoy the benefits of a strong research culture and commitment from the University, providing the vital academic and operational support necessary for our activities and the CAHE team to grow.

Our focus continues to be on making a strong contribution to the science of health economics and data science.

A handwritten signature in black ink, appearing to read "P. Scuffham".

Professor Paul Scuffham
Director, Centre for Applied Health Economics

2018 highlights

Research

The nature of health economics is such that it contributes to multiple disciplines, including outcome measurement and evaluation, cost-effectiveness analysis, welfare economics and the theory of incomplete markets, and we are pleased to advise that CAHE staff are named Chief Investigators on over 50 grants and projects current in 2018.

Research highlights include our valued collaborations in heart disease management; prostate cancer prevention and treatment; treatment with medicinal cannabis; and childhood and maternal health including cerebral palsy.

We continue to develop and strengthen research collaborations and partnerships, locally, nationally and globally. In 2018 we collaborated with entities ranging from small and medium-sized enterprises to Government agencies, working on existing research opportunities and developing new areas of research and expertise. Health economics is a developing area of expertise and CAHE continues to lead in the economic evaluation of healthcare interventions.

Teaching

The Centre teaches into the Griffith University course 7000MED – Introduction to Economic Evaluation of Health Care, a postgraduate course designed to provide students with the skills and knowledge about the principles of health economics and the applications of economic evaluation to guide decision making.

As an evolving area of expertise there is significant demand from Government agencies and departments, as well as industry to develop capability and capacity. We recognise the need to address the growing demand and so provide teaching into courses, as well as strong support for those interested in completing a PhD in health economics.

Academic awards

We are delighted to congratulate two CAHE staff members awarded Fellowships in 2018:

- Professor Paul Scuffham
Period: 2018–2022
Award: NHMRC Senior Research Fellowship
- Associate Professor Emily Callander
Period: 2019–2022 (awarded 2018)
Award: NHMRC Career Development Fellowship

Other awards

- Professor Paul Scuffham and Professor Shu-Kay (Angus) Ng
In 2018 Professor Paul Scuffham and Professor Shu-Kay (Angus) Ng were named in the Vice Chancellor's Award for Research Excellence (Research Team Group Award), awarded to the Cancer Survivorship Collaborative Research Group.
- Dr Haitham Tuffaha
Health Services Research Association Australia & New Zealand, Best Health Services and Policy Research Paper by Early Career Researcher 2018.

CAHE was pleased to sponsor the ISPOR 8th Asia-Pacific Conference 8–11 September 2018, Tokyo Japan and the ISPOR Australia Chapter Quality of Life Workshop, 1 August 2018, Brisbane



2018 highlights

Appointments

In line with our focus on growing CAHE's leadership role, capacity and capabilities, CAHE made several strategic appointments in health economics and health technology assessment:

- Associate Professor in Health Economics
- Associate Professor in Health Economics (Allied Health)
- Centre Manager
- Senior Research Fellow (PBAC projects)
- Research Fellows focused on specific diseases/projects

Academic achievements

As a result of CAHE's established reputation in health economics, in 2018 our researchers were Chief Investigators on (includes existing agreements):

- 3 NHMRC Centres of Research Excellence grants
- 2 NHMRC Fellowships
- 1 NHMRC Program grant
- 3 NHMRC Partnership grants
- 3 NHMRC Project grants
- 1 ARC Discovery grant
- 2 EMF grants

Research outputs for 2018 included:

- 119 peer reviewed publications
- 22 conference presentations
- 7 current CAHE PhD enrolments

Finances

CAHE's financial position is sound. Our success has ensured that we remain a self-funded Centre, built on a strong foundation of several large NHMRC grants, expanding collaborations and growth in income from health technology assessment.

CAHE is currently named on 12 NHMRC grants to a value of \$9.28 million, 1 ARC Discovery grant to a value of \$12,800 and 2 Emergency Medicine Foundation grants to a value of \$192,529.

Income

Research income received by CAHE in 2018 totalled \$3.75 million, a 56% increase on 2017 figures of \$2.4 million. This is broken down as follows:

NHMRC income in 2018	\$1.73 m
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Selected public sector income in 2018:

- | | |
|-------------------------|----------|
| • Australian Government | \$1.35 m |
| • Queensland Health | \$0.10 m |

Consultancies/other grants/funding organisations income in 2018	\$0.28 m
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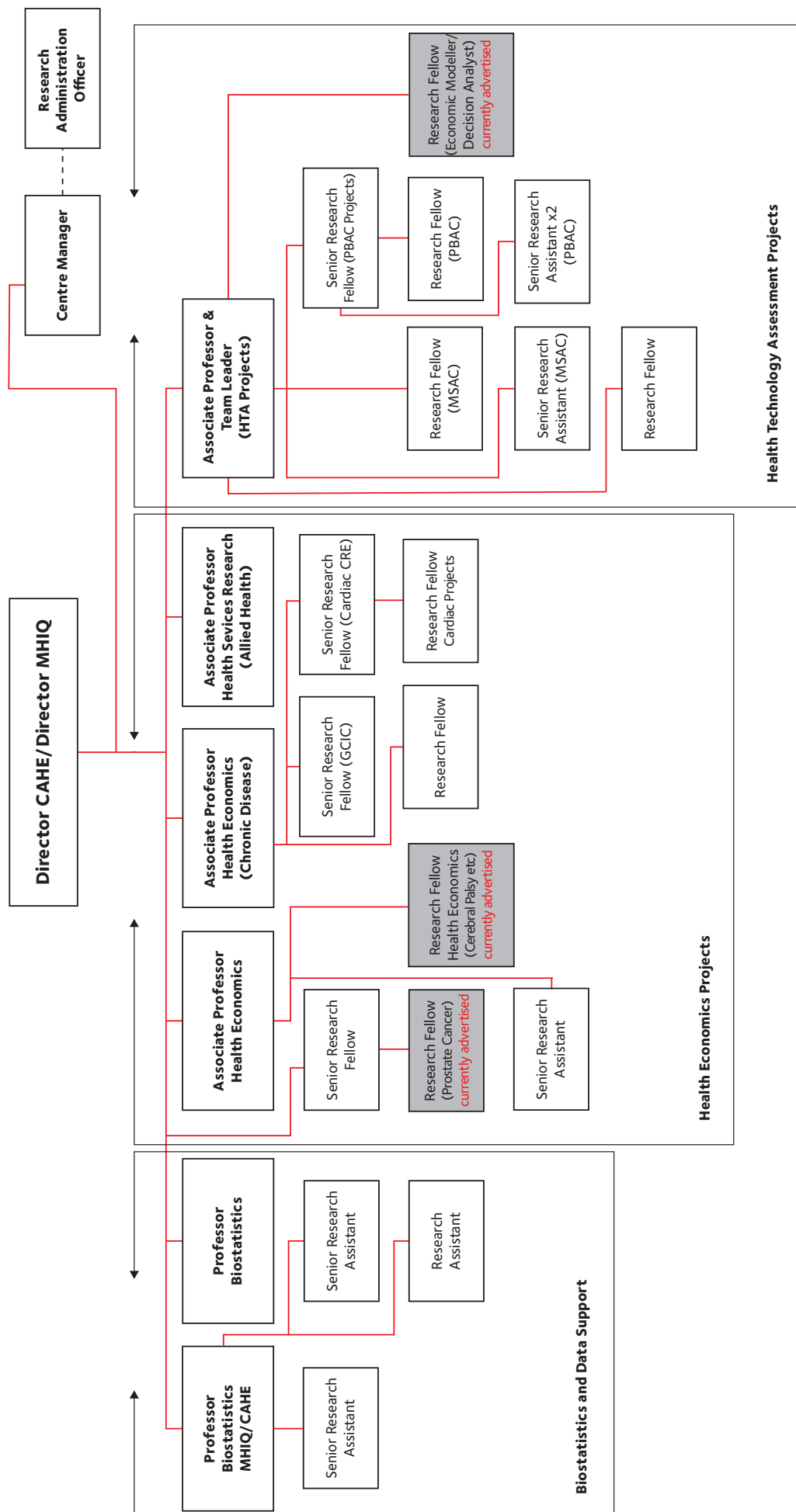
Griffith University internal income sources in 2018:

- | | |
|------------------------|----------|
| • MHIQ Capacity grants | \$0.28 m |
|------------------------|----------|

We are excited by the possibilities in taking the Centre to the next level, enabling advances in the quality of life globally.

Personnel

Our team is made up of academics, researchers and professional support staff. At the end of 2018 CAHE has a team of 24, including 3 Professors and 4 Associate Professors. We are also privileged to collaborate with numerous experts within Griffith University and externally, and a large cohort of clinicians and Academic Title Holders available to the Centre via the School of Medicine.



CAHE team

Name/Role/Qualifications	Expertise/Research interests
Professor Paul Scuffham Director FAHMS; PhD; BA(Economics); GAICD	Professor Scuffham is one of only two health economists admitted as a Fellow of the prestigious Australian Academy of Health and Medical Sciences. Professor Scuffham's specialist expertise is in economic evaluation methods; economic modelling; data analytics; valuation of health outcomes; priority setting in healthcare and methods for consumer engagement in health policy decisions; and translating economic research findings into health policy. His personal research focuses on cardiac interventions and telemedicine.
Professor Angus Ng Professor in Biostatistics PhD (Statistics); MScStud (Statistics); PGCert (Applied Statistics); BScEng (Hons)	Professor Ng has research interests focusing on statistical modelling of healthcare costs and service utilisation; the design and analysis of randomised controlled trials (RCTs); meta-analysis and mixed treatment comparison from RCTs via the applications of random-effects models; longitudinal and multilevel analyses of prospective cohort studies; comorbidity patterns and service utilisation in primary care; cluster analysis of cancer-related distress and quality of life over time for cancer patients; survival analysis; bioinformatics; computational statistics for the analysis and inference of Big Data in healthcare.
Professor Robert Ware Professor in Biostatistics PhD (Statistics); BSc (Hons I)	Professor Ware's research expertise centres on the design and analysis of longitudinal cohort studies and, in particular, developing statistical methods to deal with the impact of attrition; missing data; and non-compliance on effect estimators. He has developed an extensive theoretical and practical knowledge of the design, conduct and analysis of cohort studies.
Associate Professor Joshua Byrnes Associate Professor Health Economics (Chronic Disease) PhD; MHEcon; MEconSt; BEcon; BCom	Associate Professor Byrnes has particular expertise in economics and health economics; critical appraisal of economic evaluations; trial design; health technology assessment; economic evaluation of healthcare programs including cost-effectiveness and cost-utility modelling; systematic reviews; project management; and biostatistics.
Associate Professor Emily Callender Associate Professor Health Economics PhD; BA	Associate Professor Callendar's personal research interests are in maternal and early childhood health, particularly in using novel methods for measuring the equality and equity of healthcare and health outcomes, and the impact of health and healthcare on women's living standards.
Associate Professor Katrina Campbell Associate Professor Health Services Research (Allied Health) PhD; BHLthSci (Nutr Diet) Hons I	Associate Professor Campbell is newly appointed to a strategic health service-wide conjoint in Health Services Research (Allied Health) in Metro North and MHIQ. She will lead pragmatic clinical trials and implementation trials measuring patient, health service and economic outcomes. Associate Professor Campbell has built a career in research, clinical dietetics, academia, management and consultancy, with an international profile in the field of nutrition for chronic kidney disease.
Associate Professor Martin Downes Team Leader, Health Technology Assessment PhD; PGCert (Public Health); MVB	Associate Professor Downes has expertise in research, evaluation and publications impacting on research, policy and clinical practice nationally and internationally. His specific expertise is in epidemiology; evidence-based medicine; health technology research and assessment; economics and statistics; network meta-analyses; bringing research to completion and affecting policy decision making to deliver safe, effective and efficient healthcare solutions that are responsive to consumer preferences and improve quality of life.

Name/Role/Qualifications	Expertise/Research interests
Clifford Afoakwah Research Fellow MPhil (Economics); PGCert (Microeconometrics and Development (Economics)); BA (Economics)	Dr Afoakwah's expertise includes chronic disease research; economics of malaria; development economics; and applied microeconometrics. He has consulted widely for international organisations such as the United Nations University–World Institute for Development Economic Research, United Nations University – Institute for Natural Resources in Africa and African Economic Research Consortium.
Anna Crothers Senior Research Assistant MSc (Health Economics); BCom	Ms Crothers is experienced in health economics; program evaluation; public health; clinical trials; biostatistics; and epidemiology. She has expertise in health technology assessment; economic evaluation; data analytics (including government data); cost-effectiveness in public health; and behavioural interventions.
Fady Fam Senior Research Assistant MPH (Health Economic Evaluation); BPharmSci	Mr Fam's expertise includes health economics evaluation, and its use in decision making; preparing commentaries on industry submissions to the PBAC; health economics modelling and systematic reviews; evidence synthesis; and literature appraisal.
Haylee Fox Senior Research Assistant MPH; BN; GCResMeth (Tropical Medicine)	Ms Fox's research expertise is in maternal healthcare, particularly unwarranted over-medicalisation of labour and birth and the consequential short and long term health outcomes experienced by Australian mothers and babies. This includes assessment of variation in the provision of obstetrical interventions and clinical practice during labour and birth, examining policy and practice drivers of high obstetric intervention rates.
Brent Hodgkinson Senior Research Assistant & PhD candidate GDipHEcon; GCPH; MSc (MPhil) Physiology; BSc (Hon) Biochemistry	With over 20 years' experience conducting systematic reviews of clinical interventions Mr Hodgkinson has developed particular expertise in health technology assessment; systematic review methodology; economic modelling & evaluation; clinical research and project management.
Gemma Hynard Research Administration Officer	Ms Hynard has worked with Griffith University and the CAHE since 2005, responsible for day-to-day administrative and financial processing support for the Centre's research staff. Gemma is a recent winner of a Vice Chancellor's Award for Excellence in General Staff Service and has many years of administrative expertise in the education and research sector.
Dr Hong Ju Senior Research Fellow PhD; MPH; BMed (Clinical Medicine)	Dr Ju is a clinician-trained epidemiologist specialising in evidence-based medicine and HTA. Dr Ju was the key member of a number of start-up HTA agencies, including Queensland Health (Queensland Policy and Advisory Committee for Health Technology) and Ministry of Health, Singapore (Agency for Care Effectiveness).
Dr Stephen Law Senior Research Fellow PhD; BFin	Dr Law's areas of expertise include demography; economic modelling; and health policy research. He has extensive experience in conducting research on cost-of-illness studies; economic evaluation of public health interventions; and epidemiology of chronic disease and mental disorder.

Name/Role/Qualifications	Expertise/Research interests
Dr Annick Maujean Research Fellow PhD (Clinical Psychology); BBehSc; BPsych (Hons)	Dr Maujean's expertise includes the design, development and evaluation of psychological interventions; management and evaluation of several NHMRC and ARC project grants; quantitative and qualitative research; and academic publishing.
Lyn McPherson Senior Research Assistant BSC; GradDipHSc	Ms McPherson has expertise in all stages of the research process, including literature searching; project design; grant and ethics applications; project implementation; data collection, analysis and reporting.
Gabor Mihala Data Manager/Data Analyst ME (Mechanical); GCBiostatistics	Mr Mihala has expertise in linked data, hospital and Medicare datasets; biostatistical analysis of clinical trials; meta-analyses; and diagnostic tests.
Dr Son Nghiem Senior Research Fellow PhD; MEC; BAg.Ec	Dr Nghiem's expertise includes applied econometrics and cost-effectiveness analysis. He currently conducts various research projects using Queensland linked longitudinal data for cardiovascular diseases.
Tania Patrao Research Assistant MIPH	A public health researcher and statistical consultant, Ms Patrao has worked in Aboriginal and/or Torres Strait Islander health, cancer, cardiovascular disease, intellectual disability, problem gambling and suicide projects.
Adrienne Pryor Centre Manager PGDipPH; BCom	Ms Pryor has extensive leadership and management experience in the University and Not-for-Profit sectors, with a particular emphasis on health and social science related research environments.
Masnoon Saiyed Research Fellow MSc (Pharmacy); MPharm (Clinical Pharmacy); BPharm	Mr Saiyed is a clinical pharmacist and his research expertise is in pharmacoepidemiology; evidence-based medicine; and health economic modelling.
Dr Jean Spinks Research Fellow PhD; GDip (Languages); MHSc; MPH; BPharm	Dr Spinks expertise broadly includes health economics; public health pharmacy; health policy and health system financing; health inequalities; and access to primary healthcare; with a particular interest in 'Access to Medicines'.
Dr Haitham Tuffaha Senior Research Fellow PhD (Health Economics); MSc (Clinical Pharmacy); MBA; BSc (Pharmacy)	Dr Tuffaha is a health economist with a clinical oncology pharmacy background. His expertise encompasses economic evaluation; health technology assessment; priority setting and quality use of medicines.
Dinusha Vithanachchi Research Fellow GCom; BPharm	Ms Vithanachchi is an experienced evaluator with the Centre, with expertise in health economics; epidemiology; and data analysis. Dinusha has extensive experience undertaking analyses of PBS data.

Research

Overview

CAHE researchers are committed to driving safe, effective and efficient healthcare solutions that are responsive to consumer needs globally.

Key research areas

The CAHE is undertaking nationally and internationally significant research in the following areas:

Economic evaluation of healthcare interventions and programs

To investigate value for money we undertake cost-effectiveness, cost-utility and cost-benefit analyses to compare the health benefits and resources between competing services, devices, programs and models of care.

Measuring consumer preferences for healthcare interventions and services

Understanding consumer preferences for healthcare is integral for service planning and ongoing success by eliciting what is important for patients and end-users within our health system. The consumer voice is integral to a well-functioning and responsive health system and these inputs are studied through Discrete Choice Experiments and citizens jury research methods.

Valuing health and healthcare

Various techniques are used to estimate health state utility weights, such as Discrete Choice Experiments. Our recent research has considered a novel method for eliciting a monetary value of health related quality of life, and we are developing disease-specific measures for specific populations.

Health technology assessment

Members of CAHE form the Griffith Evaluation Group (GEG) and are responsible for evaluating pharmaceutical industry submissions to the PBAC by reporting to the Economics Sub-Committee (ESC) three times per year. This work directly contributes to Government decisions about whether to list new therapies on the Pharmaceutical Benefits Scheme (PBS) at a subsidy to Australian consumers.

The CAHE also provides education and training, including higher degree research opportunities, in these areas.

Health services research

We have developed expertise in health services research, focusing on the performance, quality, safety, effectiveness and efficiency of healthcare services as they relate to health problems of individuals and populations, as well as healthcare systems.

Our recent contributions to this field consider core areas of policy and its effectiveness in changing behaviour; care services and people's access to services; efficiency and effectiveness of healthcare services; and the quality of healthcare services and its relationship to health status.

Biostatistics

Biostatistics are a vital component of medical and public health research for informing decision making and advancing knowledge in order to improve our health and wellbeing. Key activities include designing, conducting and analysing cohort studies and clinical trials, and modelling disease processes and burden. Research in statistical modelling and computational statistics (for example mixture models in survival, longitudinal, and multilevel analyses) generate modern statistical methods for solving complex analyses and advancing the validity of scientific discovery.

Summary

Leveraging our successes and experience to date we will expand the scope of our research in the future. Our understanding of health systems, the ability to interpret complex data and application of the knowledge gained will enable us to take a leadership role in health system and policy evaluation and intervention, and the science of health economics.

Strong links with industry partners (including Government departments, health services, universities, research centres and pharmaceutical companies) will be further developed to take advantage of collaborative opportunities globally, facilitating innovation and the development of a highly trained workforce and opportunities for increased sources of funding.

Projects

Pharmaceutical Benefits Advisory Committee (PBAC) and Medical Services Advisory Committee (MSAC)

Members of CAHE are responsible for evaluating health technologies such as pharmaceuticals, medical services and diagnostic tests to inform Government decisions for funding under Medicare. The CAHE informed funding decisions amounting to \$2.3bn in Government expenditure over the five-year period 2014–2018 leading to provision of cost-effective access of quality technologies to an estimated 10 million people. Research conducted by the Centre for the Department of Health therefore has a direct impact on health policy and financial decision making in Australia.

PBAC

The PBAC is an independent expert body appointed by the Australian Government. Its primary role is to recommend new medicines for listing on the PBS. CAHE is appointed to the Panel for the period 2016–2020 to provide expert external evaluation of PBAC and health technology related submissions for the Department of Health.

We provide expert assessments on submissions from pharmaceutical companies seeking Government subsidy of a pharmaceutical or vaccine through listing on the PBS. The submissions need to demonstrate that the product is cost-effective, i.e. provides value for money. The submissions are critically appraised including a judgment on their indicated use, target population, the adequacy of patient information provided, the clinical efficacy, and the statistical analyses of clinical and economic value. The economic evidence that needs to be analysed usually involves a detailed review of the economic models presented (including the structure of the model, clinical pathway, errors in data entry or in variables).

MSAC

MSAC is an independent non-statutory committee, established by the Australian Government Minister for Health in 1998. CAHE has been providing services to MSAC since 2013, undertaking a range of evidence-based health technology services for the Department of Health to support the Committee.

MSAC appraises new medical services proposed for public funding and provides advice to Government on whether a new medical service should be publicly funded (and if so, its circumstances) on an assessment of its comparative safety, clinical effectiveness, cost-effectiveness, and total cost, using the best available evidence. Amendments and reviews of existing services funded on the MBS or other programmes (for example, blood products or screening programmes) are also considered by MSAC.

Our evaluation team in 2018 includes:

- Chief Investigators: Professor Paul Scuffham, Associate Professor Martin Downes
- Evaluators: Emilie Bettington, Anna Crothers, Fady Fam, Brent Hodgkinson, Robbie James, Peter Lee, Gail Neilson, Cassandra Ranatunga, Dinusha Vithanachchi
- Quality Assurance: Professor Paul Scuffham, Associate Professor Martin Downes, Emilie Bettington, Maria Donohue, Robbie James
- Statistical and Health Economics Advisors: Professor Robert Ware, Professor Angus Ng, Associate Professor Joshua Byrnes

PBAC and MSAC projects completed in 2018 targeted interventions in these broad clinical groups:

- Asthma
- Diabetes
- Anaemia
- Oncology
- Metabolic diseases
- Dermatology
- Neurology/psychology
- Surgical interventions

Spotlight on selected research



Professor Paul Scuffham



Associate Professor Emily Callander

Cardiovascular disease

(2014 to 2018) Optimising heart disease prevention and management

- Funding Provider: NHMRC Program Grant
- Investigators: Stewart S, Thompson D, **Scuffham P**

As we become older and risk factors such as obesity become more common, our biggest contributor to death and disability, cardiovascular disease (including heart disease), will continue to exert an enormous burden on our healthcare system and society. Multi-disciplinary teams will extend their research to create new and innovative healthcare programs to optimise the prevention and management of new heart disease and chronic forms of heart disease.

Consolidating and extending the research that has been undertaken to date has been the focus in 2018. This includes detailed analyses of a number of completed trials from a translational perspective; from health economic analyses to individual analyses designed to identify who does and doesn't benefit from the current gold-standards for the multi-disciplinary management of chronic heart disease. The project will also "seed" new and highly innovative areas of research focusing on the clinical conundrums of multi-morbidity in heart disease and the clinical phenomenon of seasonal vulnerability in heart disease.

Child and maternal health

(2018 to 2022) WOMen's action for Mums and Bubs (WOMB): A pragmatic trial of participatory women's groups to improve Indigenous maternal and child health

- Funding Provider: NHMRC Project Grant
- Investigators: Larkins S, Taylor J, Cadet-James Y, Bailie R, Farmer J, Passey M, Felton-Busch C, Matthews V, **Callander E**, Evans R

Improving maternal and child healthcare and outcomes

has an impact throughout the lifespan. Most quality improvement interventions focus on service-level action, despite evidence that up to 2/3 of variability in quality of care might be due to factors beyond health services. Good international evidence indicates participatory planning and implementation processes in partnership with community women can deliver real outcomes for improved maternal and child healthcare.

Although there have been improvements in Aboriginal and Torres Strait Islander maternal and child health, inequities remain in most measures of mortality and morbidity. The WOMB study tests whether community women's groups improve the quality of maternal and child healthcare and outcomes in Aboriginal and Torres Strait Islander communities, the cost-effectiveness and mechanism of action.

In this project, the participatory women's groups themselves will determine the issues to address in local maternal and child healthcare. Health professionals will work in partnership with participatory women's groups to translate issues to action strategies for quality improvement. Despite strengthening international evidence, this project will be the first to formally implement and quantitatively measure the effect of applying a community participation intervention to improve the quality of Indigenous maternal and child healthcare in Australia.

Associate Professor Emily Callander will work with the national team of academics, health service providers and community groups in the analysis of the WOMB intervention. Emily will lead the health economics component, which will involve a cost-effectiveness and budget impact analysis. If successful, the WOMB trial will provide rigorous evidence supporting community participation as a means for improving maternal and child health in Indigenous communities, moving towards closing the gap in health outcomes across the lifespan.



Professor Robert Ware

Health services research

(2018 to 2019) Effectiveness of revaccination of 23-valent pneumococcal polysaccharide vaccine in preventing hospitalisations for pneumonia in Aboriginal and Torres Strait Island people in North Queensland: a data linkage study

- Funding Provider: Investigator initiated study with no study sponsor
- Investigators: **Ware R**, Takashima M, Andrews R, **McPherson L**, Lambert S

This project aims to examine the effectiveness of revaccination of 23-valent pneumococcal polysaccharide vaccine (PPV23) in preventing hospitalisations for community-acquired pneumonia in the Indigenous population in North Queensland.

Aboriginal and Torres Strait Islander Australians have consistently higher rates of invasive pneumococcal disease (IPD) across all ages compared to non-Indigenous Australians. In 1999, PPV23 for Indigenous Australians ≥ 50 years of age was added to the Australian national immunisation program and from 2000 single revaccination was recommended 5 years after the first dose for Indigenous peoples ≥ 50 years of age.

A recent study by our research team suggests that re-vaccination 5 years after initial vaccination did not significantly reduce the rate of IPD notification in this population, with adult Indigenous Australians who were re-vaccinated with PPV23 5 years after their initial dose having similar rates of IPD as their peers who were not revaccinated. To inform vaccination recommendations it is critical to consider the effectiveness of revaccination in preventing community-acquired pneumonia (the most common manifestation of pneumococcal disease in adults). There are currently no data on this outcome.



Associate Professor Martin Downes

Pharmaceutical surveillance

(2017 to 2018) Post-market Review of biologics for severe chronic plaque psoriasis

- Funding Provider: Commonwealth Department of Health
- Investigators: **Downes M**, **Hodgkinson B**

The Post-market Review Section of the Department of Health undertakes systematic formal reviews to monitor use of medicines. The purpose of the project was to review the clinical guidelines, the effectiveness and the use of biologics on the PBS in severe chronic plaque psoriasis.

We conducted three systematic reviews and two network-meta-analyses for the report. Statistical analysis and financial estimates were also conducted in the review of the use of biologics on the PBS.

It is expected that the findings from this research can be used to inform clinical practice, health policy, and Government subsidy decisions in responding to improving health outcomes associated with the management of severe psoriasis. In addition, this report aims to advise Government on future financial investment requirements to expand subsidy to a larger group of patients.

The draft report is freely available online at: <http://www.pbs.gov.au/info/reviews/biologics-review-public-consultation>

Cancer



(2018 to 2022) Collaboration and Communication in Cancer Care for Aboriginal and Torres Strait Islander People: The 4Cs Project improving patient-centred care and treatment outcomes

- Funding Provider: NHMRC Partnership Project Grant
- Investigators: Garvey G, Dhillon H, Cunningham J, Penniment M, Sabesan S, Halkett G, **Callander E**

Cancer is the second leading cause of death for Aboriginal and Torres Strait Islander Australians. It impacts more heavily on Indigenous Australians than non-Indigenous Australians, with a higher incidence of more fatal cancers, higher mortality and reduced survival. Indigenous cancer patients and healthcare providers have identified an urgent need to improve patient-provider interactions which is seen to be integral to improving cancer care and health outcomes for Indigenous patients.

This partnership project is aimed at making important gains in cancer care through improved communication and collaboration, increased participation of Indigenous cancer patients in patient-provider interactions and improved cross-cultural communication for health professionals.

We aim to conduct the first health literacy intervention research among Indigenous cancer patients. More specifically, we will examine the feasibility and acceptability of innovative, culturally-appropriate strategies and resources for patients, their carers and health professionals to improve cancer support and education. In addition, we will strive to translate the findings into clinical practice thus establishing a new standard of information provision.

The outcomes will have significant policy and practice implications and will likely inform the continued refinement of optimal care pathways for Indigenous cancer patients.

(2018 to 2020) Factors associated with adjuvant endocrine therapy and radiation therapy underuse in Indigenous and non-Indigenous women with breast cancer project

- Funding Provider: Menzies School of Health Research
- Investigator: **Callander E**

This project aims to examine the rates of adjuvant endocrine therapy discontinuation amongst Indigenous and non-Indigenous women with hormone receptor-positive early breast cancer. We are also seeking to examine the differences in overall radiation therapy use between Indigenous and non-Indigenous people with cancer, by key cancer types.

(2017 to 2020) Improving patient access to novel cancer drugs in Australia: striking the balance

- Funding Provider: NHMRC Early Career Fellowship
- Investigator: **Tuffaha H**

Dr Tuffaha is exploring approaches to guide reimbursement decisions, including Managed Access Programs, of novel drugs in Australia. These are based on the value of information approach, which is a powerful tool to strike the balance between the need for early access to new technologies and the evidentiary requirements for decision making.

(2017 to 2019) National research project on remote radiology assessment service delivery model

- Funding provider: Australian Government Department of Health
- Investigators: Larkins S, Evans R, Preston R, **Callander E**, Sabesan S

This project will investigate outcomes of the BreastScreen Australia remote radiology assessment trial at sites throughout Australia. Specifically, this project will assess how the new remote radiology model affects patient safety; patient acceptability; staff acceptability of new model of service provision; and the safe, efficient organisation of BreastScreen services.

(2017 to 2018) Identifying the out-of-pocket costs of cancer care and impact on healthcare access and patient outcomes

- Funding Provider: Menzies School of Health Research
- Investigators: **Callander E**, Larkins S, Topp S, Sabesan S

This project has quantified the out-of-pocket healthcare expenditure of Indigenous people who are diagnosed with cancer and compares it with expenditure of non-Indigenous people who are diagnosed with cancer.

A qualitative research component will be undertaken, which aims to explore and explain how out-of-pocket costs (both anticipated and unanticipated) affect the health seeking decisions and behaviours of cancer patients and their families.

Publications:

- Bates N, **Callander E**, Lindsay D, Watt K (2018) CancerCostMod: a model of the healthcare expenditure, patient resource use, and patient co-payment costs for Australian cancer patients. *Health Economics Review*. 8(1):1-12.
- Bates N, **Callander E**, Lindsay D, Watt K (2018) Labour force participation and the cost of lost productivity due to cancer in Australia. *BMC Public Health*. 18(1):1-7.

(2016 to 2020) Centre for Research Excellence in Prostate Cancer Survivorship (CRE-PCS)

- Funding Provider: NHMRC Centres of Research Excellence
- Investigators: Chambers S (CIA), **Scuffham P**, Newton R, Baade P, Galvão D, Dunn J, Smith D, Wittert G, Davis I, Gardiner RA

The purpose of the Centre is to undertake strategic research to better understand and meet the survivorship needs of men with prostate cancer, their partners and families. The Centre uses evidence-based outcomes to improve policy and practice for men with prostate cancer.



(2018 to 2022) Striking the balance: Combining best patient outcomes and cost-effective interventions to manage cardiovascular disease

- Funding Provider: NHMRC Senior Research Fellowship
- Investigator: **Scuffham P**

(2018 to 2019) Transcatheter Heart Valve (THV)

- Funding Provider: Edwards Lifesciences Pty Ltd
- Investigator: **Scuffham P**

This project is to provide expert advice and opinion on health economic research and development projects for devices or therapies.

(2017 to 2020) Cardiac Tele-Testing

- Funding Provider: Metro North Hospital and Health Service
- Investigator: **Scuffham P**

This project is a collaboration with Metro North Hospital and Health Service's Professor Adam Scott on costs and cost-savings from cardiac tele-investigations.

(2017 to 2020) My Health 4 Life

- Funding Provider: Diabetes Queensland
- Investigators: Anderson D, Parkinson J, Seib C, Harris N, Henderson S, **Ng S-K, Scuffham P**, West R

CAHE will contribute to the evaluation of the My Health 4 Life program, which will develop approaches to address program gaps. The project will provide evidence on chronic disease prevention programs to inform policy and practice in Queensland, contributing to the evidence base on implementation of large scale chronic disease prevention programs. It will also contribute valuable insights into how the program achieves efficacy and effectiveness.

(2017 to 2018) Developing a new cardiovascular specific instrument to measure and value health

- Funding Provider: National Heart Foundation of Australia Vanguard Grant
- Administering Institution: Queensland University of Technology (QUT)
- Investigators: Kularatna S, **Scuffham P**, Byrnes J, Chen G

In this collaboration with QUT, Monash University and Metro North Hospital and Health Service, we will develop a cardiovascular disease (CVD) specific multi-attribute utility instrument using data from available and valid CVD specific quality of life instruments, in order to better measure and value health.

(2017 to 2018) TAVI hourly

- Funding Provider: Edwards Lifesciences Pty Ltd
- Investigator: **Scuffham P**

The purpose of this study is to assess the cost-effectiveness of transfemoral aortic valve replacement intervention (TAVI-TF) compared with SAVR and with medical management in patients with symptomatic severe aortic valve stenosis from an Australian healthcare provider perspective.



(2018 to 2023) Early diagnosis and early intervention for infants with cerebral palsy: implementation of international evidence-based guidelines into practice

- Funding Provider: NHMRC Partnership Project Grant
- Administering Institution: University of Melbourne
- Investigators: Spittle A, Novak I, Boyd R, Morgan C, Doyle A, Dale R, **Scuffham P**, Whittington K, Colditz P, Pannek K

Early diagnosis of Cerebral Palsy (CP) enables earlier intervention and prevention of complications. This partnership grant involves a Tailored Multifaceted Knowledge Translation strategy for early diagnosis of CP, enabling access to earlier intervention to prevent complications, and to support parent mental health. The ultimate goal is to reduce the age of CP diagnosis in Australia, thereby improving the child's and parent's long-term outcomes.

(2018 to 2019) PREDICT, CP Child, REACH and PREBO outcomes to inform services for children with Cerebral Palsy

- Funding Provider: The University of Queensland
- Investigator: **Scuffham P**

This study will consider approaches to monitoring of resource use and direct costs of treatments.

(2016 to 2019) Advancing Cerebral Palsy in Queensland

- Funding Provider: Advance Queensland Innovation Partnerships
- Investigators: Boyd R, Colditz P, Rose S, Karunanithi M, Smith A, **Scuffham P**, Edwards P, Novak I

This project will develop, test and implement new toolboxes of biological and clinical markers, for very early detection of Cerebral Palsy in preterm and term-born infants. These innovative toolboxes will be translated into

clinical products/technologies. The program will evaluate the reduced costs and improved consequences for Queensland of earlier detection of Cerebral Palsy and the fast tracking to optimal interventions.

(2014 to 2019) PREDICT Outcomes to inform services for children with Cerebral Palsy

- Funding Provider: NHMRC Partnership Project Grant
- Investigators: Boyd R, Rose S, Trost S, **Scuffham P**, McKinlay L

The Predict CP study will implement state-wide comprehensive surveillance (in Queensland) to examine the relationship between brain structure on growth and physical outcomes (motor capacity, muscle and bone health, physical activity, oropharyngeal function, nutrition), cognition (executive function, educational attainment, communication), and participation. CAHE will supervise a post-doctoral Research Fellow to undertake the economic analysis in the PREDICT study.



(2018 to 2020) Economic Evaluation: Comparing Midwifery caseload with other maternity models of care (MoMeNT)

- Funding providers: Gold Coast Hospital and Health Foundation, Gold Coast University Hospital
- Investigators: Brittain H, **Callander E**, Gamble J, Creedy D, Ellwood D, Toohill J, Slavin V

Collaborators from Griffith University and Gold Coast University Hospital (GCUH) will assess the value of GCUH's caseload midwifery model, compared to standard team midwifery care. The results will be used to inform ongoing service reform at GCUH.

(2018 to 2019) Association between influenza vaccination during pregnancy and adverse birth outcomes

- Funding Provider: Investigator initiated study with no study sponsor
- Investigators: **Ware R**, McHugh L, Andrews R, **Byrnes J**, **McPherson L**, Lambert S

Vaccination against pertussis is usually given in the third trimester, and vaccination against influenza is recommended for all pregnant women at any stage of pregnancy, particularly those who will be in the second or third trimester during the influenza season. The aim of this study is to conduct a retrospective cohort study among births in Queensland, Australia between July 2015 and December 2018 to assess the association between timing of influenza and pertussis vaccination during pregnancy and birth outcomes using routinely collected health data.

(2018) Developing a companion handbook to the Midwifery Continuity of Care Handbook

- Funding provider: Queensland Health
- Investigators: Donnellan-Fernandez R, **Callander E**, Brittain H

The project developed a companion handbook and financial resources to be used by maternity service providers in building a business case for the provision of caseload midwifery care.

(2017 to 2021) Australian Centre for Research Excellence in Stillbirth

- Funding Provider: NHRMC Centres for Research Excellence
- Investigators: Ellwood D, **Callander E**

The Centre of Research Excellence in Stillbirth (Stillbirth CRE) has been established to address the problem of stillbirth in Australia. Specifically, the Stillbirth CRE recognises that stillbirth has enormous economic and psychosocial impacts; that there has been virtually no reduction in rates for over 20 years; that large equity gaps exist; and that families whose child is stillborn often receive suboptimal care.

(2017 to 2020) Responding to domestic and family violence in the context of maternity care: Applying a trauma and violence informed care framework to better understand how to optimise an integrated response

- Funding provider: Gold Coast University Hospital
- Investigators: Carrasco A, Fenwick J, Creedy D, Baird K, Boddy J, Nelson J, **Callander E**, Tighe K, O'Malley R

This project seeks to quantify the excess of costs of domestic violence in pregnancy.

(2014 to 2019) My Baby's Movements: A stepped wedged cluster randomised trial of maternal awareness and reporting of decreased fetal movements to reduce stillbirth (MBM)

- Funding Provider: NHMRC Project Grant
- Investigators: Flenady V, Gardener G, Middleton P, Coory M, Ellwood D, Crowther C, East C, **Callander E**, Norman J, Boyle F

Stillbirth directly affects over 2,700 families in Australia and New Zealand each year and is associated with devastating and long-lasting psychosocial impact. Some late-pregnancy stillbirths may be preventable with early detection of a baby's ill-health, which may be indicated by Decreased Fetal Movements (DFM). Maternal reporting of (DFM) has therefore been proposed as a simple, inexpensive stillbirth screening tool.

This trial will evaluate 'My Baby's Movements' (MBM); a package of interventions to raise awareness and promote early reporting and optimal clinical management of DFM. MBM will be evaluated as part of a large multi-centre clinical trial across participating hospitals in Australia and New Zealand.

(2014 to 2019) Should we treat iron deficiency anaemia of pregnancy with lactoferrin? A randomised controlled trial

- Funding provider: NHMRC Project Grant
- Investigators: Tarnow-Mordi W, Dibley M, Norman J, Reynolds R, **Callander E**

Iron deficiency is the world's commonest nutritional disorder, affecting over 2 billion people. Women and children are at greatest risk. This is the largest Randomised Controlled Trial in iron deficiency anaemia in pregnancy and the first to assess fetal growth and neonatal iron status, which each have a major impact on child development. Better treatment of iron deficiency anaemia will impact health and economic potential worldwide.



(2018 to 2019) Implementation of GCPHN Value for Money Evaluation Framework

- Funding Provider: Primary Care Gold Coast Limited
- Investigators: Vecchio N, **Tuffaha H**, Radford K, Chai A, **Scuffham P**

This project aims to apply the Triple Aim framework to evaluate healthcare interventions provided by the Gold Coast Primary Health Network (GCPHN). The project also includes the delivery of professional workshops to build GCPHN's staff capacity in health economics. This will result in a professional report with recommendations for the GCPHN leadership to improve healthcare intervention commissioning.

(2017 to 2020) Expanding the role of mixture models in statistical analyses of big data

- Funding Provider: ARC Discovery Project
- Investigator: **Ng S-K**

New data analytic tools and algorithms are being developed for the statistical analysis of big data sets to which classical methods of inference cannot be applied directly due to either the complexity of the data set or its sheer size.

A key aspect is the development of new algorithms to enable the application of the new or appropriately modified existing inferential procedures to complex and large data sets. Such applications will lead to breakthrough discoveries and innovation in science, engineering, health and medicine, for the promotion of improved health and quality of life.

(2016 to 2018) The impact of implementing a Watch House Emergency Nurse (WHEN) model of care

- Funding Provider: Emergency Medicine Foundation Ltd Grant
- Investigators: Crilly J, **Scuffham P**

CAHE has contributed to a comprehensive evaluation of a trial of a model of care developed following recommendations arising from the coronial investigation into deaths in custody in Australia.

(2015 to 2019) Economic evaluation of the Gold Coast University Hospital Integrated Care program

- Funding Provider: Department of Health
- Investigators: **Scuffham P**, McMurray A, **Law CK**

The Gold Coast Integrated Care program, based at the Gold Coast Hospital and Health Service (2014-2018), aimed to proactively manage high risk patients with complex and chronic conditions in collaboration with general practitioners to provide effective disease management and reduce potentially preventable hospitalisations. Supported by funding from the Department of Health, CAHE is leading the program evaluation to determine the effectiveness and costs of the new model of care.



(2018) Antimicrobial Resistances (AMR)

- Funding Provider: Commonwealth Department of Health
- Investigators: **Scuffham P, Downes M, Byrnes J, James R, Hodgkinson B, Ranatunga C**

The aim of this project was to conduct a systematic review to assess the economic impact of AMR in Australia and internationally and quantify the economic impacts of AMR in Australia. It is anticipated that the research findings can assist the Government to set priorities for action to control the emergence of AMR in Australia and advise the Government on future financial investment requirements in responding to AMR.

(2018 to 2019) CHest optimisation through antibiotics Infused via Midline or Peripherally inserted central catheter (CHIMP) trial: A randomised controlled trial

- Funding Provider: Children's Hospital Foundation, Queensland
- Investigators: Ullman A, Kleidon P, **Byrnes J**

Outcomes research/ preferences and patient reported experience measures



(2018 to 2020) Using a Discrete Choice Experiment (DCE) to quantify and value patient experiences in the emergency department

- Funding Provider: Emergency Medicine Foundation Ltd
- Investigators: Spain D, **Byrnes J, Bull C**, Crilly J, Chaboyer W, Fitzgerald G, **Scuffham P**, Mulhern B

Improving patient experiences is part of Queensland's 2016-2020 strategic plan to enable safe, quality healthcare services. The aim of this project is to develop an emergency department patient experience classification system and accompanying scoring algorithm that can be used to both measure and value patient experiences in Queensland Emergency Departments. It will provide a proof of concept for an Australia-wide development, valuation and knowledge transfer study.



(2018 to 2019) Data Linkage

Project - Potentially Preventable Medication Related Hospitalisations (PPMRHs)

- Funding Provider: Queensland Health
- Investigators: **Ware R, Spinks J**

The aim of this data linkage project is to identify the rate and cost of potentially preventable medication related hospitalisations in Indigenous Australians. The results of this project will inform extrapolation of the results for the Griffith University led Indigenous Medication Review Service (IMeRSe) study: A Feasibility Study of an Indigenous Medication Review Service. In addition to the data linkage component of the project, we will carry out analysis of the data to determine which Hospital and Health Service regions/communities have the highest rates of medicine related potentially preventable medication related hospitalisations.

(2018 to 2019) Post-market Review (PMR) of the use of biologics in the treatment of severe chronic plaque psoriasis (CPP): cost-effectiveness component

- Funding Provider: Commonwealth Department of Health
- Investigators: **Scuffham P, Byrnes J, Downes M, Nghiem S, Vithanachchi D, Hodgkinson B**

The contracted output is to provide the cost-effectiveness component of a Post-market Review (PMR) of the use of biologics in the treatment of severe chronic plaque psoriasis.

(2017 to 2020) Indigenous Medication Review Service (IMeRSe) - Improved medication management for Aboriginal and Torres Strait Islanders through pharmacist advice and culturally appropriate services: A Feasibility Study

- Funding Provider: Commonwealth Department of Health
- Partners: The Pharmacy Guild of Australia, National Aboriginal Community Controlled Health Organisation (NACCHO)
- Investigators: Wheeler A, **Spinks J**, Kelly F, **Ware R, Scuffham P**

Trial research



The objectives of the study are fourfold: to develop a high-quality intervention (IMeRSe) for improving medication management for Indigenous consumers through enhanced integration of community pharmacists and AHSs; to ensure the intervention is acceptable and implementable across a range of settings (including urban, regional/rural and remote) and Allied Health Service (AHS) types (Aboriginal Community Controlled Health Services and Government AHSs), including study enrolment and retention rates; to describe current understandings of 'usual care' and key differences in understanding evoked by this term across a range of settings and service types; and to investigate the practicality of identifying serious medication related problems through the use of a prespecified list of PPMRHs that can be used to estimate the effect of the IMeRSe intervention.

(2017 to 2022) Australian Centre for Cannabinoid Clinical and Research Excellence (ACRE): Quality and safety in the implementation of medicinal cannabis use in the community

- Funding Provider: NHMRC Centres of Research Excellence
- Administering Institution: University of Newcastle
- Investigators: Martin J, Solowij N, Huang X-F, Edgar K, Gunn J, Bonomo Y, Lintzeris N, **Scuffham P**, Popat A

Concern has been raised about the lack of coordinated collection of useful observational efficacy and safety data from users of medicinal cannabis, which could easily be collected in a well governed data infrastructure. This information is needed to both inform clinical practice, and to guide Government, regulatory and environmental research and policies. ACRE will provide a well governed collaborative strategy to generate world class research in medicinal cannabis. CAHE will contribute important expertise in the design, economic evaluation and translation of research to this Centre of Research Excellence.

(2016 to 2018) Cannulation Rates in the Emergency Department Intervention Trial (CREDIT)

- Funding Provider: Metro North Hospital and Health Service
- Investigators: **Scuffham P**, Rickard C, **Mervin C**

This study aimed to identify current rates of cannulation in a tertiary Emergency Department (ED), and sought to assess the effect of introducing an intervention (CREDIT protocol) designed to empower emergency physicians, their trainees and nursing staff to make informed decisions about the need for insertion of peripheral intravenous cannula (PIVC). This program benefits patients and health services alike, with potential for large cost savings.



(2018 to 2020) Sustainable, Cost Effective, Smart Assisted Independent Living – Smarter Safer Homes (SCEFSAIL-SSH)

- Funding Provider: Commonwealth Scientific and Industrial Research Organisation
- Investigators: **Byrnes J, Scuffham P**

CAHE is contracted in an advisory role and to provide health economic analysis.

(2018 to 2019) Let's get active

- Funding Providers: Townsville Hospital and Health Service
- Investigator: **Nghiem S**

Dr Son Nghiem has been appointed in an advisory role to the THHS, to conduct the economic evaluation and advise on health economics methodology.

(2017 to 2018) Optimising research funding decisions in Australia: Assessing the value for money

- Funding Provider: The Prostate Cancer Foundation of Australia Grant
- Investigators: **Tuffaha H, Scuffham P**

This project aimed to develop a practical tool to assess the value for money of clinical trials and cohort studies. A comprehensive review of criteria considered by funding organisations was undertaken together with the development of a framework to guide research prioritisation. The review was published in BMJ-Open.

(2015 to 2018) Celebrate. Remember. Fight Back. Episodic Volunteering for Non-Profits

- Funding Providers: ARC Linkage – Project: CANCQ Industry Partner; UICC Industry Partner; VQI Industry Partner; ACSI Industry Partner

- Investigators: Chambers S, Hyde M, **Scuffham P**, Stein K, Torode J, Basanovic M, Dunn J, **Ng S-K**

(2014 to 2018) Preventing bone and muscle injury during army recruit training

- Funding Provider: Defence Health Foundation Grant
- Investigators: Beck B, **Scuffham P, Bahrapour M**

CAHE is providing economic analysis and contributing to a report on cost-effectiveness of pre-conditioning training for Defence Force recruits in Australia.

Griffith University internal grants awarded in 2018 - \$285,178

MHIQ Capacity Grants Scheme

Year	Project information
2018–2020	The Triple E Program; Expanding Partnerships and Collaborations, Enhancing Grant Applications, Enabling Early and Mid-Career Researchers. Ball L, Gillespie B, Tuffaha H , Marshall A, Grealish L, Latimer S, Roberts S
2018–2020	Developing objective processes for health policy decision-making and priority setting that include fit-for-purpose approaches for engaging the public. Scuffham P , Byrnes J, Tuffaha H , Burton P, Rundle-Thiele S, Littlejohns P, Norman R, Hansen P
2018–2019	Medicating the masses – who's going to do it and who's going to pay? Incorporating preferences into agent-based and system dynamics simulation models to identify policy options. Spinks J , Birch S, Lancsar A, Byrnes J , Nghiem S , Wheeler A, Nissen L, McDonnell G, Scuffham P
2018–2019	Development of a preference-based patient reported experience measure. Byrnes J , Downes M , Chaboyer W, Mulhern B, Bull C

Focus on PhD's

Candidates enrolled in CAHE

Student name	Supervisors/Advisors	Thesis topic
Mina Bahrampour	Principal Supervisor: Professor Paul Scuffham Associate Supervisors: Associate Professor Joshua Byrnes; Associate Professor Martin Downes	Developing a Cerebral Palsy Preference-Based Utility Measure using a Discrete Choice Experiment for cost-utility analyses.
Claudia Bull	Principal Supervisor: Associate Professor Joshua Byrnes Associate Supervisors: Professor Paul Scuffham; Professor Wendy Chaboyer	How much are patients willing to pay for integrated care across primary and secondary care services?
Ruvini Hettiarachchi	Principal Supervisor: Professor Paul Scuffham Associate Supervisors: Dr Muhandiramalage Sanjeewa Kularatna; Associate Professor Joshua Byrnes	Application of cost-utility analysis in oral health: Preventive oral health interventions among children and adolescents as an example.
Brent Hodgkinson	Principal Supervisor: Professor Paul Scuffham Associate Supervisor: Associate Professor Joshua Byrnes	Determining the most cost-effective lifetime varicella/herpes zoster vaccination strategy.
Li Li	Principal Supervisor: Professor Paul Scuffham Associate Supervisors: Associate Professor Tracy Comans; Associate Professor Joshua Byrnes	Development of Dementia-Specific Health-Related Quality of Life Utility Instrument for People with Dementia in Australia.
Erin Pitt	Principal Supervisor: Associate Professor Tracy Comans Associate Supervisors: Dr Catherine Cameron; Dr Kim-Huong Nguyen; Professor Danielle Gallegos; Dr Lukar Thornton	The influence of the food environment and socio-ecological determinants on early childhood dietary intake: a mixed methods exploration.
Richard Tawiah	Principal Supervisor: Professor Angus Ng Associate Supervisor: Professor Suzanne Chambers	Frailty models for the analysis of recurrent event data in studies of chronic diseases.

CAHE academic staff also supervise students enrolled through other universities, as Primary or Secondary Supervisors, reflecting a contribution beyond Griffith University to the creation of new knowledge and academic endeavour.



Spotlight on PhD's

CAHE PhD students are an integral part of the CAHE team, conducting independent research under expert supervision to produce strong and relevant findings and outcomes. Students are provided with opportunities to showcase their in-depth knowledge of their subject as they progress, and are actively involved in research projects, providing experience and opportunities to work with experts in their field. Explore below the experiences of some of CAHE's current cohort of PhD's.

Mina Bahrampour

PhD title: Developing a Cerebral Palsy Preference-Based Utility Measure using a Discrete Choice Experiment for cost-utility analyses.

My PhD project is about valuing health in children with Cerebral Palsy and developing a utility set that can be used in economic evaluation of interventions for Cerebral Palsy. The utility set will be developed using patient and public preferences.

Because of my passion for health economics, I decided to continue my studies and complete a PhD with a team undertaking research in health economics specifically related to health valuation and assessment. CAHE has a great team of health economics researchers, so joining CAHE is a great opportunity for me. The Centre has given me the opportunity to access special training courses and networking events, which are hugely beneficial.

Once I have completed my PhD I would like to pursue a career as a health economist and see the impact of my research informing positive change in policies for children with Cerebral Palsy.

The Centre and Griffith University provide great workshops and seminars for students, which are really helpful. The nice working environment, support group and friendly atmosphere helps decrease the stress, especially for international students.

I would recommend undertaking a PhD with CAHE due to the variety of disciplines and expertise, great supervisors, new projects, team work, warm people – what else is needed!



Claudia Bull

PhD title: Valuing patient experiences in Queensland emergency departments.

My program of research aims to value patient experiences in Queensland emergency departments.

As part of this research, I intend to develop an emergency department patient experience classification system (EDPECS) that will be applied in discrete choice experiments for the purposes of estimating patient experience utility values.

I will also undertake a pilot study at the Gold Coast University Hospital using the EDPECS to demonstrate its feasibility for use as a routine data collection instrument.

I am undertaking a PhD to enact positive change in healthcare and medical decision-making and I believe that the discipline of health economics is very influential in such decision-making. CAHE is very well connected to other health economics research centres in Australia, providing many great networking and collaboration opportunities.

My research has given me the opportunity to learn a lot about survey/instrument development and validation, and I'm looking forward to developing skills in valuation techniques and economic evaluation.

Post PhD completion I would love to undertake research overseas for a period of time, continuing on a health services research route whilst still applying health economic techniques to drive value-based healthcare decision-making. The strength of support systems in place for Griffith PhD students – including medical services on campus, researcher education and development workshops, and the services provided by the GU Postgraduate Student Association – have all contributed positively towards my PhD experience.



Brent Hodgkinson

PhD title: Modelling a cost-effective vaccination strategy for the prevention of varicella and herpes zoster infection.

The attraction for me to undertake my PhD at CAHE is that CAHE provided the opportunity and support to pursue a PhD in health economics while providing full time employment within CAHE.

I have benefitted enormously from being surrounded by experts in health economics within CAHE, and the professional development and skill attainment embedded within my ongoing role as a Research Assistant with CAHE supports my PhD studies.

The skills I have learned in the short time since commencing my studies that will benefit my future career are critical appraisal of cost-effectiveness studies, economic modelling and network meta-analysis – key skills for the determination of the effectiveness, and cost-effectiveness of health related interventions.

Following the completion of my PhD I plan to continue research in health technology assessment within the academic environment.

In support of my studies, CAHE provides me with great resources, infrastructure and easy access to expertise, and time to pursue my PhD. CAHE places significant importance on the contribution of the PhD program and students on the culture and success of the Centre, and I would highly recommend CAHE for a health economics PhD.

Engagement

Visiting academics

We welcome academic and research collaboration from across the globe, to build knowledge and create opportunities. In 2018 we were pleased to host Visiting Fellow – Professor Abbas Bahrampour, Kerman University of Medical Sciences, Kerman, Iran (mid 2017 to August 2018).

If you are interested in visiting Brisbane and collaborating with us, please contact our Director via email at cahe@griffith.edu.au.

Visiting speakers

In 2018 we welcomed to CAHE:

- Dr Erika Borkoles: Faculty of Health, Queensland University of Technology
- Dr Ben Geisler: Massachusetts General Hospital, Boston, USA
- Dr Quan Huynh: Baker Heart & Diabetes Institute, Melbourne
- Dr Terri Jackson: University of Melbourne
- Dr Jianfeng Luo: Shanghai Medical University, China
- Professor Don Matheson: General Manager, Health Alliance between the Brisbane North Primary Health Network and Metro North Hospital and Health Service
- Mr Brendan Mulhern: Centre for Health Economics Research and Evaluation, University of Technology, Sydney
- Ms Laura Pirhonen: Gothenburg University, Sweden

Journal editorships in 2018

External service to profession/discipline		
Name	Date	Description of role
Professor Paul Scuffham	2016–20	Editorial Advisory Board – Value in Health
	2017–19	Guest Editor – Medical Decision Making Policy & Practice – Special Issue on Malaria Vaccines
	2013–19	Associate Editor – Medical Decision Making
	2014–19	Associate Editor – Medical Decision Making Policy & Practice
	2015–18	Associate Editor – International Journal of Environmental Research and Public Health
	2004–	Editorial Board – Journal of Medical Economics
	2008–	Editorial Board – BMJ Case Reports
	2011–	Editorial Board – Journal of Clinical Trial Results
Professor Angus Ng	2003–	Associate Editor – Journal of Statistical Computation and Simulation
Associate Professor Joshua Byrnes	2018	Associate Editor – PLoS ONE
Associate Professor Emily Callander	2018	Associate Editor – BMC Public Health
	2018	Associate Editor – PLoS ONE
Dr Haitham Tuffaha	2018	Editorial Board – Editorial Board Member – Pharmacoeconomics – Open

External appointments, committee and panel memberships in 2018

Name	Appointment	Appointing entity
Professor Paul Scuffham	Visiting Professor	University of Plymouth, United Kingdom
	Early Psychoses Youth Services program	Department of Health
	Queensland Health – Queensland Policy and Advisory Committee for new Technology (QPACT) committee member (economic expert)	Queensland Health
	Rhodes Scholarship Selection Panel	Rhodes Trust
	Research Committee member	International Society of Pharmacoeconomics and Outcomes Research (ISPOR) Asia Congress (Tokyo)
	Co-Chair (Research)	ISPOR 8th Biennial Asia-Pacific Conference 2018 (Tokyo)
	International Expert Advisory Committee, Health Technology Assessment	Ministry of Health, Singapore
	Reports Committee member	Australian Academy of Health and Medical Sciences
	Chair – Selection Committee	Australian Academy of Health and Medical Sciences
Professor Angus Ng	Program Technical Panel member	IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2018; Spain)
Professor Robert Ware	Panel member	NHMRC Clinical Trials and Cohort Studies Project Grant Panel
Associate Professor Joshua Byrnes	President-elect	ISPOR – Australian Chapter
	Clinical advisory committee member	Brisbane South Primary Health Network Clinical Advisory Committee
Associate Professor Emily Callander	Pharmaceutical Benefits Advisory Committee (Economic Subcommittee Guest Discussant)	Department of Health
	Tropical Australian Academic Health Centre Workforce Development Working Group	Tropical Australian Academic Health Centre

Name	Appointment	Appointing entity
Associate Professor Katrina Campbell	Scientific Committee member	Australasian Kidney Trials Network
	Board member	Dietitians Association of Australia
	Associate Council member	International Society of Renal Nutrition and Metabolism
Dr Jean Spinks	Invited guest	Queensland Health Medicines Advisory Committee
Dr Haitham Tuffaha	Chair	Clinical Oncology Society of Australia (COSA) – Epidemiology Group
	Co-Chair	Australian Clinical Trials Alliance (ACTA), Research Prioritisation
	Secretary	ISPOR – Australian Chapter
	National Breast Cancer Early Detection Guidelines Committee (Expert member)	Cancer Council Australia
	ISPOR Scientific Committee (member)	ISPOR – 8th Biennial Asia-Pacific Conference 2018 (Tokyo)

Conference participation in 2018

Authors	Conference	Paper title	Role
Professor Paul Scuffham	Australian Health Economics Society	How to publish and review articles – an Editor's perspective	Invited speaker
	ISPOR (closed) Round Table, Tokyo, Japan	Use of Real World data	Invited speaker
	ISPOR (closed) Round Table, Tokyo, Japan	Public engagement in decision-making	Invited speaker
	Research Australia Round Table	Translating Research into Practice: Bariatric Surgery	Invited speaker
Professor Angus Ng	International Conference on Econometrics and Statistics EcoSta 2018, Hong Kong	Advances in statistical modelling for complex biomedical and health data	Organiser and Chair of Session
	International Conference on Econometrics and Statistics EcoSta 2018, Hong Kong	A mixture regression model of multivariate generalized Bernoulli distributions	Invited speaker
Associate Professor Joshua Byrnes	Association for Vascular Access, USA	Towards value-based care	Invited speaker
Associate Professor Emily Callander	Women's Healthcare Australasia Annual Quality and Safety Forum	The value of resource use associated with ROUTINE Induction of Labour	Invited speaker
	Women's Health Care Australasia Directors of Nursing and Midwifery Annual Meeting	Selling MGP to your executive: what health economics can add	Invited speaker
	Australian Society of Medical Imaging and Radiation Therapy Annual Research Conference	Data linkage for identifying patient costs	Invited speaker
	Clinical Excellence Division, Queensland Health	Presenting the Maternity Model Estimator	Invited speaker
	Queensland Health Data Linkage Symposium	Data linkage for identifying patient costs: two case studies from maternity and cancer care	Invited speaker

Authors	Conference	Paper title	Role
Associate Professor Emily Callander continued	Annual Stillbirth Update, Stillbirth Centre of Research Excellence, Australia	Building the evidence base for the cost of stillbirth: a necessary piece of the picture to facilitate decision-making	Invited speaker
Associate Professor Martin Downes	ARCS Annual Conference Healthcare 40 – the data imperative, Sydney, Australia	Evaluation group perspective on PBAC submissions	Invited speaker
	Joint Biostats/Evidence Synthesis Network, The University of Manchester and National Institute for Health and Care Excellence	Critical Appraisal, Evidence Synthesis and Policy with an Australian Perspective	Invited speaker
	ISPOR – AC Workshop, UTS, Sydney, Australia	PBAC Submissions; The Ins, The Outs & The Roundabouts; Section 4 and beyond	Invited speaker
Dr Jean Spinks	European Health Economics Conference, Maastricht	Risky business, healthy lives – how does risk perception influence lifestyle choices, health service preferences and impact health?	Presenter
Dr Haitham Tuffaha	ACTA 2018 Summit, Sydney, Australia	Research Prioritization Issues and Approaches	Invited speaker
	The Australian Centre for Health Services Innovation, Brisbane, Australia	Value of Information Analysis Informing Adoption and Research Decisions	Invited speaker
	COSA ASM, Perth, Australia	Health Technology Assessment in Oncology	Invited speaker
	ISPOR, Tokyo, Japan	Value of Information, Principles and Applications	Presenter
Dinusha Vithanachchi	Australian Epidemiology Association Annual Scientific Meeting	Biologic utilisation for psoriasis associated with latitude in Australia	Presenter

Peer reviewed publications

Adu MD, Malabu UH, **Callander EJ**, Malau-Aduli AE, Malau-Aduli BS (2018) Considerations for the Development of Mobile Phone Applications to Support Diabetes Self-Management: A Systematic Review. *JMIR MHealth and Uhealth*. 6(6):e10115.

Afoakwah C, Deng X, Onur I (2018) Malaria infection among children under-five: the use of large-scale interventions in Ghana. *BMC Public Health*. 18(2018):1-13.

Alele FO, **Callander EJ**, Emeto TI, Mills J, Watt K (2018) Socio-economic composition of low-acuity paediatric presentation at a regional hospital emergency department. *Journal of Paediatrics and Child Health*. 54(12):1341-1347.

Allen J, Rey-Conde T, North JB, Kruger P, Babidge WJ, Wysocki AP, **Ware RS**, Veerman JL, Maddern GJ (2018) Processes of care in surgical patients who died with hospital-acquired infections in Australian hospitals. *Journal of Hospital Infections*. 99(1):17-23.

Atwell K, **Callander E**, Lindsay D, Marshall P, Morris S (2018) Selection Bias and Outcomes for Preterm Neonates. *Pediatrics*. 142(1):1-10.

Bahrampour M, Bahrampour A, Amiresmaili M, Barouni M (2018) Hospital service quality – patient preferences – a discrete choice experiment. *International Journal of Health Care Quality Assurance*. 31(7):676-683.

Barnsbee L, Barnett AG, Halton K, **Nghiem S** (2018) Cost-effectiveness. Eds Shaun D Gregory, Michael C Stevens & John F Fraser *Mechanical Circulatory and Respiratory Support*. Chapter 24:749-772.

Bates N, **Callander E**, Lindsay D, Watt K (2018) CancerCostMod: a model of the healthcare expenditure, patient resource use, and patient co-payment costs for Australian cancer patients. *Health Economics Review*. 8(1):1-12.

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