

2021 Annual Research Report

Research and Innovation
within Sunshine Coast Health



Sunshine Coast
Hospital and Health Service



Queensland
Government

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Acknowledgement of Traditional Owners

The Sunshine Coast Hospital and Health Service respectfully acknowledges the Traditional Custodians, the Kabi Kabi (Gubbi Gubbi) and Jinibara people on whose land we provide our services.

We also pay our respects to the Aboriginal and Torres Strait Islander Elders, past, present, and future and recognise the strength and resilience that Aboriginal and Torres Strait Islander people and their ancestors have displayed in laying strong foundations for the generations that follow.





Dr Brad McCall
Clinical Director, Research

Foreword

This report acknowledges and celebrates the achievements and progress made by SCHHS researchers in 2021. Research is an integral part of core business for SCHHS and despite another year of challenges presented by the COVID-19 pandemic, we have continued towards our goal of supporting translation of research to patient care across our region.

Building research capability of SCHHS departments has been a particular focus for the Research Governance and Development Unit (RGDU) in 2021. We have supported departments to develop their own Research Strategies and provided a range of opportunities to increase research capability and enhance research culture and engagement.

In 2021, we commenced a program of new internal research grants. These have been generously supported by the SCHHS Study, Research, Education Trust Fund (SERTF) and Wishlist. These grants will support individual researchers, departmental research expansion, and strengthen meaningful SCHHS-led research

collaborations between departments, academic partners and other external institutions and industry partners. Congratulations to all of our 2021 internal and external grant recipients recognised in this report and a huge thank you to everyone involved in the grants development, application and assessment process.

In December, the RGDU supported a Sunshine Coast Health Institute (SCHI) grant writing workshop for SCHHS researchers, SCHI Partners and the Primary Health Network, which addressed key topics including turning a research idea into a fundable project and creating collaborations. The workshop was a great success, and we intend to host similar events in the future.

The input of our patients, consumers, and the community via the Consumer Research Engagement Group (CREG), has provided valuable and unique perspectives on new projects in 2021. We will be continuing to emphasise the importance of consultation with community stakeholders moving forward.

One of our primary foci in 2022 will be the growth of Clinical Trials, especially, involvement in the Australian Teletrial Program, which has received significant funding from the Australian Federal Government. Our hospitals across the HHS will act as both primary and satellite sites for trials under the program, with the aim of increasing equity of access to clinical drug trials for rural and regional communities. We are excited to see the continued translation of research into practice and the benefits for our patients in the coming year.

Finally, a thank you to our researchers and to all who support research here at SCHHS. The RGDU, Clinical Trials Unit, the SCHI Library, Departmental research staff, the Wishlist Hospital Foundation, the SERTF Committee, members of our Research and Clinical Trial Steering Committees, and support from the SCHHS Board and Executive, are integral to the realisation of our research vision at SCHHS.

Research Snapshot Total Active Research Projects In 2021



New research projects in 2021

In 2021 the SCHHS had 318 research projects that were 'active' according to research governance and ethics approval authorisation and currency.

These projects included clinical trials, investigator-led clinical research and all novice, early career, and experienced researcher local and collaborative studies across our organisation.

Our Oncology department (including haematology, medical and radiation oncology) had the greatest number of active projects at 59. Other highly active departments included Renal, Paediatrics, Intensive Care, and Stroke/Geriatrics, as seen in Figure 1. In 2021 there were 75 new studies authorised by the governance team, with Medical Services having the highest number of new projects approved, as seen in Figure 2.

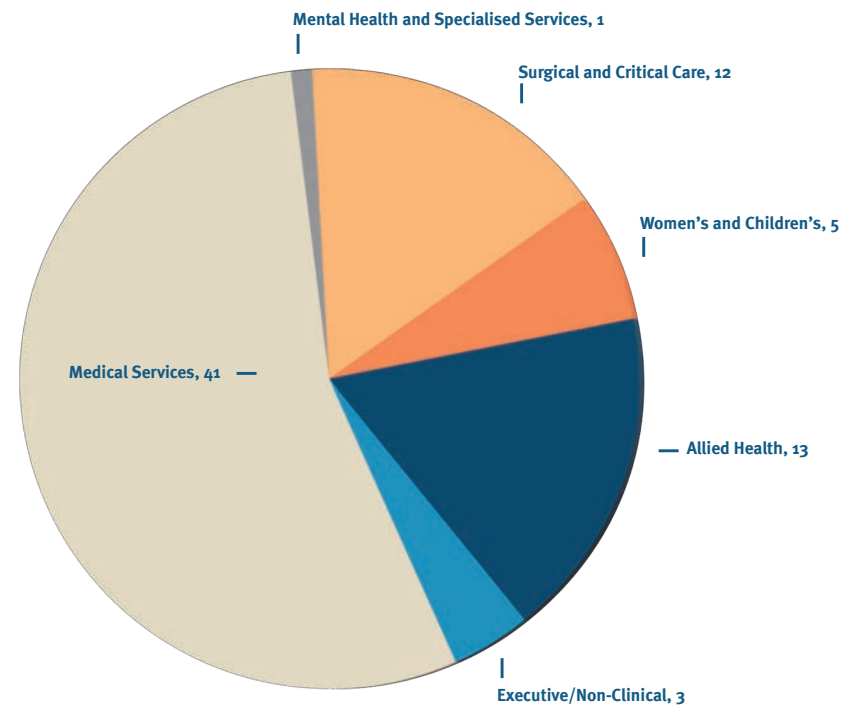


Figure 2: Distribution of new research projects between service groups in 2021 (n=75)



New research projects approved in 2021 – by discipline:

Discipline	Count
Oncology	13
Emergency	5
Intensive Care	5
Renal	5
Infectious Diseases	4
Paediatrics	4
Pharmacy	4
Hepatology	3
Nutrition and Dietetics	3
Physiotherapy	3
Respiratory	3
Cardiology	2
Communications	2
Dermatology	2
Neurology	2
Orthopaedics	2
Paediatric Intensive Care	2
Anaesthetics	1
Executive	1
General Medicine	1
General Surgery	1
Medical Imaging	1
Mental Health	1
Neonatology	1
Psychology	1
Speech Pathology	1
Stroke Geriatrics	1
Vascular Surgery	1
TOTAL	75

Of these projects, 18 were clinical trials as follows:

Discipline	Count
Oncology	8
Renal	3
Respiratory	2
Dermatology	2
Hepatology	1
Orthopaedics	1
Vascular Surgery	1
TOTAL	18

SCHHS Research Strategic Plan 2021-2026

Vision

Research constitutes core business for Sunshine Coast Hospital and Health Service (SCHHS), and has been identified as one of the key opportunities for our organisation in the Strategic Plan 2020-2024.

Our opportunities:

Grow research and education capability - Leading and embedding an education and research culture.

Supporting translation of research to patient care across our region

The SCHHS Research Clinical Council is custodian of this strategy. The council's purpose and scope:

- » Provide recommendations to SCHHS on strategic research issues
- » Make decisions in alignment with relevant codes and strategies
- » Ensure clinician input is included in the decision-making process
- » Communicate appropriate information widely across SCHHS
- » Advise the Clinical Director Research on matters of research importance
- » Report to the stakeholders including the Executive Director Clinical Governance Education and Research, Service Group leaders, SCHI Research Advisory Group and other key sub-committees.



Our Research Priorities:

- » Support and develop excellent research across disciplines within the SCHHS
- » Develop a strong and vibrant research community culture to attract and retain high performing researchers to the SCHHS
- » Develop a stronger framework where translation of the impact and outcomes of research are prioritised and communicated
- » Build on existing strong partnerships with key institutions and facilitate the development of new partnerships

Our core capabilities and strengths



Access to leading research facilities across the Sunshine Coast University Hospital and Sunshine Coast Health Institute sites in addition to other SCHHS locations



Sunshine Coast Health Institute partnership with leading education providers – Griffith University, TAFE Queensland and University of the Sunshine Coast (USC)



Proximity to the USC campus and the strengthening of our research collaborations across its various health-related disciplines



Relationships with leading academics and practitioners from research institutions and organisations across the state and nationally



The rapid growth of the region, and the developing profile of our region as a location with a thriving innovation, entrepreneurial, collaborative, and digital ecosystem

Delivering our research strategy

STRATEGIC PRIORITIES

Support excellence in research

Develop a strong and sustainable research culture

Increase the translation of research into clinical practice

Grow partnerships

OBJECTIVES

Support and develop excellent research across the disciplines within SCHHS

Develop a strong and vibrant research community culture to retain high performing researchers and attract more to SCHHS

Develop a stronger framework where translation of the impact and outcomes from research are prioritised and communicated

Build on existing strong partnerships with key institutions and facilitate the development of new partnerships

ACTIONS

- Build on our existing research strengths and recognise opportunities for alignment with national and regional health research focuses
- Increase the quality and volume of research activity and funding across the SCHHS through the effective deployment of resources to support research growth and development
- Provide guidance and training to all researchers to give them the skills to undertake robust research with the highest possible impacts and outcomes
- Ensure all research staff, and those supporting them, have access to research education and skills training at the core of departmental culture
- Provide effective research governance and development support which prioritises the aims and ambitions of researchers and partners

- Recruit and retain the best researchers at all career stages across clinical disciplines
- Grow the mentoring and interactions between researchers in a supportive and attractive environment including developing pathways for early career researchers
- Support staff in the development of large funding applications in our areas of strength and encourage research income generation through clinical trials
- Support clinicians to develop a strong research and learning culture and recognise the role of research students in promoting research
- Celebrate and encourage our local research achievements through regular research symposiums, showcases and other communication strategies

- Seek to ensure research has impact beyond academic recognition through the engagement of people within organisations to effect policy and practice
- Promote activities that communicate our research strengths, achievements, and successes through greater engagement across SCHHS and with the wider public
- Support the scaling of research activities that are focused on delivering evidence-based approaches to improve healthcare delivery, service improvement and promote best practice through continuous learning
- Ensure our quality improvement activities clearly identify key deliverables and service outcome impacts and monitor their translation into practice
- Provide support for experienced, novice and emerging researchers to nominate translational research projects within their disciplines
- Ensure participation of researchers in relevant clinical meetings to ensure sharing of research findings with clinical staff

- Build strong links at SCHHS and researcher level with other researchers, academics, institutions, and industry, to nurture productive and sustainable partnerships
- Develop partnerships at regional, national, and international levels that support our research ambitions and development of long-term sustainable relationships
- Build a strong and transparent framework for partnership engagement and the development and sharing of successful research programs
- Work closely with SCHI and our partner institutions to grow the SCHHS visiting researcher program and encourage high quality applications from other leading institutions
- Increase the visibility of SCHHS as a quality research and partnering institution through our online presence and interactions with SCHI
- Build relationships with related health care entities such as the Public Health Network (PHN) who may wish to collaborate on new clinical care models and research

Contact us

Search online for SCHHS Research
 (07) 5202 2992
 SC-Research-Support@health.qld.gov.au

Research Governance and Development Unit

The Research Governance and Development Unit (RGDU) team comprises five key areas, all working towards the realisation of the SCHHS research strategic vision.

The RGDU team can be contacted via email: SC-Research-Support@health.qld.gov.au

Governance

Ensures all research conducted across our institution complies with required legislation, standards and guidelines and has been appropriately reviewed and approved.

Support

Provides general support to researchers to facilitate the development of their research projects

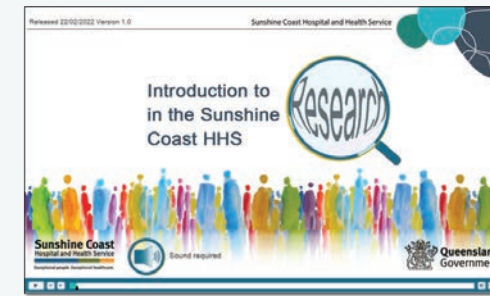
Assists researchers with the review of research protocols and methodology and the processes involved in gaining approval for research

Support researchers in the development of new research programs, funding applications, research collaborations and partnerships, navigation of research approval requirements and general research advice

Finance

Manages the day-to-day financial aspects of research across the SCHHS

Ensures that departmental and individual project research funds are managed in compliance with agreed standards and procedures



Quality

Assists with the establishment of quality clinical research activity documentation

Engages in clinical research monitoring and support to ensure that patient wellbeing and research quality standards are met across the SCHHS

Provides guidance on good research governance, conduct, management, compliance, and reporting

Grants

Supports SCHHS researchers with internal and external grant applications

Manages internal SCHHS grants from application and assessment, through to grant milestones and reporting to funders/key stakeholders

New Researcher Education e-learning module!

In 2021, the RGDU launched a new education resource to support SCHHS researchers with all aspects of designing a research project ranging from where to seek support, developing a research protocol, and research approval processes, through to research monitoring and reporting. Please login to LOL and search for 'Introduction to Research' to access the module.

and has been appropriately reviewed and approved.

Research Clinical Committee

The Research Clinical Committee (RCC) reports to the SCHHS Executive Safety and Quality Committee and provides strategic advice and recommendations to the SCHHS Chief Executive regarding research.

The RCC ensures clinician input is gained and included in the decision-making processes for all strategic research matters and ensures that appropriate information is communicated widely through the SCHHS.

Clinical Trials Steering Committee

The purpose of the Clinical Trials Steering Committee (CTSC) is to provide leadership, management direction, governance, and decision-making for the successful delivery of clinical trials services within the SCHHS.

With the introduction of the National Clinical Trials Governance Framework, the CTSC aims to ensure that appropriate governance policies and procedures are in place to ensure compliance with this Framework. In addition, the CTSC provides a forum to develop strategies to ensure the sustainability of quality clinical trials across the SCHHS.

Research Operations Group

The purpose of the Research Operations Group (ROG) is to bring together key SCHHS research personnel to collectively develop standardised procedures for the operation of research activity within the SCHHS. The ROG is responsible for the identification of issues, proposal of solutions and making recommendations to the Clinical Director Research for consideration and approval in relation to operational research issues.

Consumer Research Engagement Group

The Consumer Research Engagement Group (CREG) provides a forum for the interaction between consumers and SCHHS researchers for the sharing of insights, perspective, and considered feedback on research plans and activities across the health service. The CREG facilitates and supports the involvement of consumers and the community in the development and oversight of healthcare related research projects being undertaken, or being developed, across the health service.

The CREG aims to represent the consumer perspective and provide responsive feedback regarding opportunities to strengthen research project design and delivery to optimise the attraction and involvement of consumers in clinical research and clinical trials offered by the SCHHS.



The Clinical Trials Unit continued to be involved in a range of research projects and clinical trials in 2021 including commercially sponsored trials, collaborative trials with multi-centre networks, and local investigator-led trials.

Clinical Trial growth in 2021 remained steady, with the continuation of the global COVID-19 pandemic creating ongoing challenges, resulting in delays with many trials.

Information about our site facilities, services, and support can be found under the research tab of SCHHS website: www.sunshinecoasthealth.qld.gov.au.

The study below is an example of one of our many clinical trials that aim to provide benefits to patients and the community.



ColoSTAT™ Trial

A prospective, cross-sectional, multicenter study to evaluate the clinical performance of the ColoSTAT™ In Vitro Diagnostic for the detection and evaluation of biomarkers associated with the occurrence of colorectal cancer

Dr Andrew Sloss - Principal Investigator

Sarah Dennien - Clinical Trial Coordinator

This exciting trial tested a new screening tool called ColoSTAT™ for assessing the risk of Colorectal Cancer (CRC). CRC is the second most



common internal cancer in Australia in both men and women. Doctors currently use diagnostic tests such as colonoscopies and analysis of biopsies to detect the presence of CRCs and determine the stage. In Australia and most of the European Union, a screening tool to detect blood in the stool is commonly used to identify those who may be required to undergo a colonoscopy. This screening tool uses the Faecal Occult Blood Test (FOBT), or more specifically now the Faecal Immunochemical Test (FIT or iFOBT).

The FOBT and FIT have been shown to detect early the signs of CRC and therefore reduce both the morbidity and mortality associated with CRC. However, a high rate of false positive results often leads to unnecessary colonoscopies. The test is also not suitable for people with haemorrhoids, Inflammatory Bowel Diseases or any other condition where blood in the stool may occur. Many people are reluctant or refuse to take part in this screening, compromising the effectiveness of such important health initiatives.

The ColoSTAT™ test is being developed to provide an alternative option for people to undergo a CRC screening test but for clinical, personal or cultural reasons, are unwilling or unable to use a stool test or are reluctant to undergo more invasive and costly procedures such as colonoscopy and sigmoidoscopy.

ColoSTAT™ involves the collection of

a blood sample, rather than stool, to assess the presence of components in the blood which, when assessed using a specifically designed algorithm, provide a CRC risk score. The algorithm uses the results from the blood test and incorporates other CRC risk factors, such as family history and lifestyle factors to determine this risk rating. The technology has been shown to demonstrate comparable sensitivity to the FIT for later stage cancers, and better sensitivity in the detection of early-stage disease.

This prospective, cross-sectional study aimed to determine the performance of the ColoSTAT™ test in detecting CRCs compared with the gold standard – colonoscopy. The study also aimed to incorporate CRC risk factors as well as compare ColoSTAT™ performance to the FIT, and the ability to detect clinically actionable (advanced) adenoma, including sessile serrate adenomas, and colorectal neoplasia (CRC and advanced adenoma).

The outcome of the study aims to benefit the community as a whole to allow a novel approach to screening for CRC risk factors that may be preferred by some over the collection of stool samples. The overall benefit is to aid early detection of CRC, reducing morbidity and mortality from this disease. We are awaiting an exciting publication of the results of this trial.

This research is being conducted and Sponsored in Australia by Vision Tech Bio Pty Ltd.



Research revenue in 2021



Research revenue from external sources received directly into SCHHS cost centres from Jan-Dec 2021 was around \$2m.

This reflected an increase in Research Grant funding by 33 per cent, and an increase in other Non-Commercially

Funded Collaborative Research by 15 per cent. Commercially Sponsored Clinical Trials remaining steady, at just over \$800k. This result was the highest revenue recorded across recent years and we continue to observe an upward trend in research revenue received by the SCHHS.

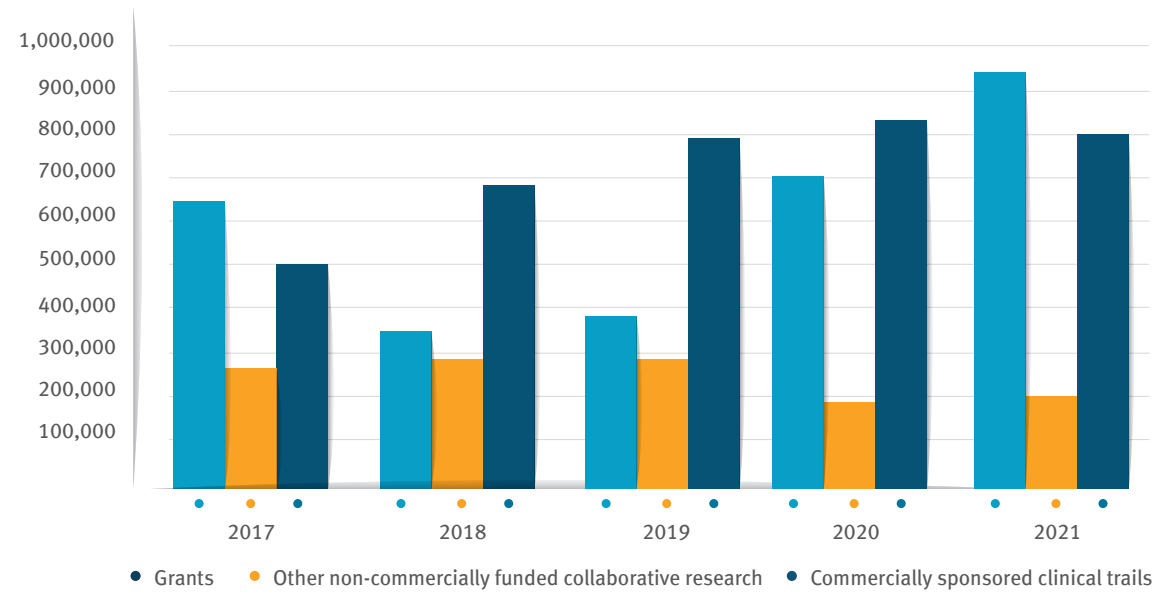


Figure 3: Revenue from 2017-2021



Congratulations to all our 2021 grant recipients



SERTF-Wishlist Departmental Capacity Building Seed Grant – for research capacity building within their departments.



Dr Keat Choong
Clinical Director of Infectious Diseases, Medical Services



Dr Nicole Buddle
Director of Radiation Oncology, Medical Services



Brett Dalglish
Director of Pharmacy, Allied Health Services



Dr Shiv Erigadoo
Clinical Director of Respiratory Medicine, Medical Services



Dr Bryan Chan
Staff Specialist, Medical Oncology



Dr Michael Allen
Medical Oncologist



Associate Professor Paula Lister
Director Paediatric Critical Care, Surgery and Critical Care



Dr Beng Ng
Director Obstetrics & Gynaecology, Women's & Children's Services



Dr Joshua Richmond
Director of Haematology Oncology, Medical Services



Dr Kathleen Houston
Acting Director Medical Oncology, Medical Services

SERTF-Wishlist Clinician Researcher Fellowship Grants



Paul Williams
Assistant Director of Pharmacy
(Clinical), Allied Health

Project: Optimising care of critically ill patients through improved antibiotic dosing

This Fellowship will look at the optimisation of dosing of antibiotics in critically ill patients to achieve better patient outcomes, clinical cure, and survival.



Dr Shradha Subedi
Senior Medical Officer Infectious
Diseases and Microbiology,
Medical Services

Project: Evaluation of a rapid diagnostic panel for pathogen detection from Cerebral Spinal Fluid in patients with suspected meningitis and encephalitis

This Fellowship will improve patient outcomes by identifying the cause of Central Nervous System Infections rapidly, reducing time to appropriate/targeted therapy and lowering the overall cost of health care by decreasing length of hospital stay and complications.



Amber Jenkins
Registered Nurse & Registered
Midwife, Women's and Children's
Services

Project: Mindfulness-Based group interventions for mental health concerns in the pregnancy: A mixed methods study

This Fellowship will explore the association between a mindfulness-based group intervention in the antenatal period, with women's perinatal mental health and maternal-fetal attachment.



Dr Clare Thomas
Director of Paediatrics, Women's
and Children's Services

Project: Evaluation of a paediatric inter-facility initiative for acutely unwell children in regional Queensland: Standardised Work-flow for Inter-Facility Transfer of Kids

This Fellowship will explore the acceptability and feasibility of SWIFTKids processes by patients/family and staff and evaluate health service outcomes and costs associated with the strategy.



Dr Rachael Nugent
Senior Medical Officer Obstetrics
& Gynaecology, Women's and
Children's Services

Project: Exploring Body Mass Index (BMI) > 35 in Pregnancy – Experience, Intervention, Outcomes

This Fellowship will investigate health priorities regarding the personal and family health for women with a BMI > 35 attending antenatal care and further explore Continuous Positive Airway Pressure for Obstructive Sleep Apnoea in pregnancy.

SERTF-Wishlist Collaborative Research Grant



Project: Improving Patient Outcomes by the Application of Functional Imaging-Guided Radiotherapy Dose Escalation and Organ Sparing in Solid Tumours

Together with researchers from University of the Sunshine Coast, this project will undertake six different studies aiming to use functional imaging optimise treatments to improve cancer outcomes and overall patient quality of life.

Dr Myo Min
Senior Medical Officer Radiation Oncology, Medical Services



Project: A mixed-methods study to inform health service planning for patients with non-alcoholic fatty liver disease (NAFLD) in regional areas in Queensland

Given the rising prevalence of NAFLD and the staggering morbidity and health care costs associated with complications of cirrhosis, this study (with Metro South HHS and QIMR Berghofer Medical Research Institute) will provide important information to guide health service planning for this patient group.

Professor James O'Beirne
Senior Medical Officer Hepatology, Medical Services



Project: Resuscitation in Paediatric Sepsis using Hydrocortisone, Vitamin C, and Thiamine - A Randomized Controlled Multicentre Trial (RESPOND study)

Working with collaborators from QLD Children's Hospital, University Children's Hospital in Zurich and QLD Health, this collaborative project continues work aimed at faster septic shock resolution in critically ill children to improve overall health outcomes.

Associate Professor Paula Lister
Director Paediatric Critical Care, Surgery and Critical Care



Project: PING Study (Pleural Infection Next-Generation sequencing): The use of next-generation sequencing to assess the microbiology of pleural space infections (PSI).

Working with collaborators from University of the Sunshine Coast, this collaborative project aims to provide a more accurate and timely diagnosis of PSI with improved treatment, better patient outcomes, and reduced risk of antimicrobial resistance development through more appropriate and targeted antimicrobial use.

Dr Tim Baird
Senior Medical Officer Respiratory, and Sleep Physician, Medical Services

Clinical-Academic Collaborative PhD Scholarship

(via University of the Sunshine Coast)



Project: Optimising spontaneous vaginal birth in nulliparous women

The overarching aim of this study is to identify key factors associated with spontaneous vaginal birth at term, in nulliparous vertex, singleton, pregnant women. Clinical and non-clinical (including maternal, neonatal, health professional and system) factors will be examined through a systematic review and retrospective cohort predictor study.

Dr Rachael Nugent
Senior Medical Officer Obstetrics & Gynaecology, Women's and Children's Services

Queensland Advancing Clinical Research Fellowship

(via University of Queensland)



Project: A novel dietary approach to modulate the gut microbiota in gestational diabetes mellitus

This project will evaluate a new dietary approach designed to reduce gestational diabetes. It includes a consumer-focused approach to improving diet care, tests the effectiveness of the new approach, describes potential cost savings and enhances the translation of findings into clinical practice.

Nina Meloncelli
Dietician, Allied Health



Wishlist Project Grant



Project: Pharmacist-led Antibiotic Oral Challenge and Allergy De-labelling Program

Patricia Kilfoyle
Pharmacist, Allied Health



Coverdale-Anstey Young Investigator Prize 2021

In December, the Sunshine Coast Junior Doctors Society (SCJDS) was excited to award the 2021 Coverdale Anstey Young Investigator Prize to SCHHS Obstetrics and Gynaecology Senior Registrar, Dr Emma Seed.

Dr Seed presented her winning abstract: Water Immersion for labour and birth: A prospective cohort study, at the annual award event held at the Sunshine Coast Health Institute and coordinated by the SCHHS Research team. Dr Seed's study investigated maternal and fetal outcomes following warm water immersion and/or waterbirth compared with land birth. Maternal preference for warm water immersion and waterbirth is increasing yet peak bodies internationally are not unanimously supportive of this pain relief option and adoption into obstetric guidelines and clinical practice remains limited. Concerns regarding safety and a paucity of evidence have been cited as reasons for the limited adoption and uptake.

The research, co-authored by Dr Lauren Kearney, Dr Rachael Nugent, Professor Edward Weaver, and Dr Elizabeth Ryan, found that maternal and neonatal outcomes were similar between the groups, with no increased risk evident in the waterbirth and warm water immersion groups. This study contributes to the growing body of literature examining water immersion and waterbirth, arguing that hesitation and lack of support for waterbirth amongst obstetric staff is unfounded and not based on current evidence. Demand for access to non-pharmacological analgesia continues to increase and birth providers must be flexible and proactive in meeting these demands.

The Coverdale-Anstey research awards recognise Associate Professor Chris Anstey and Dr Steve Coverdale



Associate Professor Chris Anstey, Dr Emma Seed, and Dr Steve Coverdale, at the award presentations

and their pioneering work in medical research on the Sunshine Coast. This unique prize, with a monetary component of \$1000, was established to encourage research as an integral component to the training and development of junior medical doctors. It is open to all medical students, interns, junior doctors, and fellows who take part in research and are currently employed or in a clinical placement at SCHHS within the current calendar year.

Thank you to all the Junior Doctors who presented their research in 2021: Dr Clare Mahon, Dr Andrew Clawson, Dr Jack Sharpies, Dr Oliver Trevelyan-Thomas, Dr Adeline (Xin Yu) Foo, Dr Sid Kaladharan, Dr Keiran Davis. Please contact the SCJDS for information regarding the Coverdale-Anstey Young Investigator Prize: <https://www.scjds.com.au/home>.



Dr Emma Seed, 2021 Coverdale-Anstey Young Investigator Prize winner





Gemma Turato
Executive Director Allied Health Service
Group Doctoral Student 2021

Allied Health

PRESENTATIONS:

1. **Turato, G. A.** and F. Oprescu, *Enablers for allied health front-line managers in public health environments to deliver sustainable patient care*. Conference Lightning Oral Presentation, Presented at the 14th National Allied Health Conference, 9-12 August 2021, Online. <https://nahc.com.au/6826>
2. **Turato, G. A.** and J. Whiteoak, *A case study experience exploring leadership strategies that can improve frontline Allied Health professionals' perceptions of workplace well-being and patient quality outcomes*. Conference Lightning Oral Presentation, Presented at the 14th National Allied Health Conference, 9-12 August 2021, Online. <https://nahc.com.au/6824>

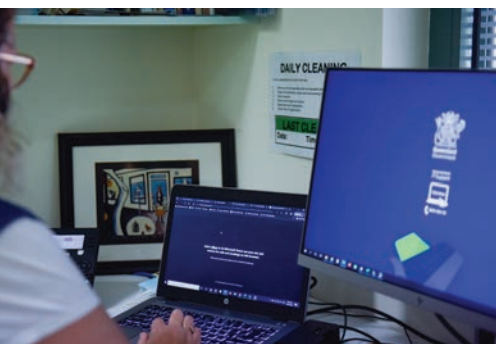
Audiology

POSTERS:

1. **Kelb, S.**, Chief Allied Health Officer's Choice for Best Poster Award, *Paediatric Audiology Clinical Assistants are valued within the department and the organisation*. Poster presentation at The Monash Health Allied Health Assistant (AHA) Day Conference, 2021, Online.

PRESENTATIONS:

1. **Donlen, N., S. Kelb, T. Philp** and **T. Sargent**, *An overview of audiological screening and when to refer*. Community Hearing Screeners Nurses Network Session, Interprofessional Education Session, August 2021.



Nutrition and Dietetics

PUBLICATIONS:

1. Clark, J., **C. McFarlane**, G. Cleo, C. Ishikawa Ramos, and S. Marshall, *The Impact of Systematic Review Automation Tools on Methodological Quality and Time Taken to Complete Systematic Review Tasks: Case Study*. JMIR Medical Education, 2021. **7**(2): p. e24418. DOI: 10.2196/24418
2. Conley, M.M., **C.M. McFarlane**, D.W. Johnson, J.T. Kelly, K.L. Campbell, and H.L. MacLaughlin, *Interventions for weight loss in people with chronic kidney disease who are overweight or obese*. The Cochrane Database of Systematic Reviews, 2021. **3**: p. CD013119. DOI: 10.1002/14651858.CD013119.pub2
3. **Emsley, C.**, S. King, I. Nyulasi, and G. Snell, *A GLIMMER of insight into lung transplant nutrition: Enhanced detection of malnutrition in lung transplant patients using the GLIM criteria*. Clinical Nutrition, 2021. **40**(5): p. 2521-2526. DOI: 10.1016/j.clnu.2021.02.047
4. **McFarlane, C., R. Krishnasamy, T. Stanton, E. Savill**, J. T Kelly, M. Snelson, G. Mihala, M. Morrison, D.W. Johnson, and K.L. Campbell, *Gut health interventions in chronic kidney disease: Acceptability and feasibility of of synbiotic supplementation*. Nephrology, Dialysis, Transplantation, 2021. **36**(SUPPL 1): p. i351-i352. DOI: 10.1093/ndt/gfab089.003
5. **McFarlane, C., R. Krishnasamy, T. Stanton, E. Savill**, M. Snelson, G. Mihala, M. Morrison, D.W. Johnson, and K.L. Campbell, *Diet quality and protein-bound uraemic toxins: Investigation of novel risk factors and the role of microbiome in chronic kidney disease*. Journal of Renal Nutrition, 2021. DOI: 10.1053/j.jrn.2021.10.003
6. **McFarlane, C., R. Krishnasamy, T. Stanton, E. Savill**, M. Snelson, G. Mihala, M. Morrison, D.W. Johnson, and K.L. Campbell, *Diet quality, protein-bound uraemic toxins and gastrointestinal microbiome in chronic kidney disease*. Nephrology, Dialysis, Transplantation, 2021. **36**(SUPPL 1): p. i57. DOI: 10.1093/ndt/gfab139.002
7. **McFarlane, C., R. Krishnasamy, T. Stanton, E. Savill**, M. Snelson, G. Mihala, J.T. Kelly, M. Morrison, D.W. Johnson, and K.L. Campbell, *Synbiotics easing renal failure by improving gut microbiology II (SYNERGY II): A feasibility randomized controlled trial*. Nutrients, 2021. **13**(12). DOI: 10.3390/nu13124481

PRESENTATIONS:

1. **McFarlane, C., R. Krishnasamy, T. Stanton, E. Savill**, M. Snelson, G. Mihala, M. Morrison, D.W. Johnson, and K.L. Campbell, *Diet quality, protein-bound uraemic toxins and gastrointestinal microbiome in chronic kidney disease*. Nephrology, Dialysis, Transplantation, 2021. **36**(SUPPL 1): p. i57, 58th ERA-EDTA Conference, 5-8 June 2021, Berlin, Germany.

2. **McFarlane, C., R. Krishnasamy, T. Stanton, E. Savill, J. T Kelly, M. Snelson, G. Mihala, M. Morrison, D.W. Johnson, and K.L. Campbell, *Gut health interventions in chronic kidney disease: Acceptability and feasibility of of synbiotic supplementation.* Nephrology, Dialysis, Transplantation, 2021. **36**(SUPPL 1): p. i351-i352, 58th ERA-EDTA Conference, 5-8 June 2021, Berlin, Germany.**
3. **Robertson, S., R. Grimley, A. Burton-Jones, I. Rosbergen, and S. Brauer, *The impact of a clinically-led electronic medical record (EMR) innovation in stroke: Research protocol.* Stroke Conference 2021, Stroke Society of Australia, 12-15 October 2021, Perth/Online.**
4. **Robertson, S., I.M. Rosbergen, A. Burton-Jones, R. Grimley, and S. Brauer, *The effect of the electronic medical record (EMR) on interprofessional practice: Systemic review.* School of Health and Rehabilitation Sciences Post Graduate Research Conference, 2 December 2021, Brisbane**



Occupational Therapy

RESEARCH CONTACT: Kirsten Cook Kirsten.cook@health.qld.gov.au

Research Interests

- Cognitive recovery in acute stroke (Alana Campbell)
- Measures of spasticity in the upper limb post Stroke (Rehab, Stroke)
- Parental engagement and motivation in managing children with developmental and behavioural difficulties (Julie Creen)
- Developmental delay and typical outcomes in very preterm and very low birth weight infant (Maxine Jackson)

Internal Research Grants

Wishlist/ SERTF Collaborative Research Grant: Julie Creen

Research Higher Degree Students

- Alana Campbell, Completing PhD Research Higher Degree
- Julie Creen, Completing PhD Research Higher Degree

Future Research Plans/Interests

- “Uncharted territory: The feasibility of serial computerized cognitive assessment the first week post stroke.”
- Shear Wave Elastography in the Biceps Post-stroke and the development of spasticity – rehabilitation and acute stroke
- Advanced allied health practice: parental engagement and motivation in managing children with developmental and behavioural difficulties
- PREMTIME study” Prediction of mild developmental delay and typical outcomes in very preterm and very low birth weight infants”

Nutrition and Dietetics

PUBLICATIONS:

1. Craswell, A., **K. Bennett**, J. Hanson, **B. Dalglish**, and M. Wallis, *Implementation of distributed automated medication dispensing units in a new hospital: Nursing and pharmacy experience.* Journal of Clinical Nursing, 2021. **30**(19-20): p. 2863-2872.DOI: 10.1111/jocn.15793
2. **Gauld, L.**, G. Kyle, A. Poudel, and L. Nissen, *Colony stimulating factors to treat febrile neutropenia: What do we know and what should we be doing?* Journal of Oncology Pharmacy Practice, 2021. **27**(2): p. 21-22.DOI: 10.1177/1078155220985357
3. **Hansen, M.**, *Should we be shaping the assessment to the assessor?* Pharmacy Growth, Research, Innovation and Training (Pharmacy GRIT), 2021. **5**(1-2): p. 63.
4. **Hansen, M.**, *Using design thinking to support workforce learning,* Pharmacy Growth, Research, Innovation and Training (Pharmacy GRIT), 2021. **5**(1-2): p. 64.
5. **Hansen, M.**, *Digital transformation of pharmacy education,* Pharmacy Growth, Research, Innovation and Training (Pharmacy GRIT), 2021. **5**(1-2): p. 64.
6. **Mayfield, K., H. Nguyen, C. Smith, and T. Morris, *The impact and value of a pharmacist within a persistent pain management service.* Journal of Pharmacy Practice and Research, 2021. **51**(6): p. 505-510.DOI: 10.1002/jppr.1757**
7. **Mayfield, K., L. White, T. Nolan, X. Conner, B. Dittmer, C. Abi-Fares, and A. Mitchell, *Management of surgical patients on opioid replacement therapy: An audit of current practice.* Journal of Perioperative Practice 2021: p. 17504589211045233.DOI: 10.1177/17504589211045233**
8. Roger, C., B. Louart, L. Elotmani, G. Barton, L. Escobar, D. Kourenti, J. Lipman, M. Leone, L. Muller, C. Boutin, J. Amour, I. Banakh, J. Cousson, J. Bourenne, J.M. Constantin, J. Albanese, J.A. Roberts, J.Y. Lefrant, and Azurea Network (SCHHS member – **P. Williams**), *An international survey on aminoglycoside practices in critically ill patients: the AMINO III study.* Annals of Intensive Care, 2021. **11**(1): p. 49.DOI: 10.1186/s13613-021-00834-4
7. Sandaradura, I., J.W. Alffenaar, M.O. Cotta, K. Daveson, R.O. Day, S. Van Hal, C. Lau, D.J.E. Marriott, J. Penm, J.A. Roberts, A. Tabah, **P. Williams**, and S. Imani, *Emerging therapeutic drug monitoring of anti-infective agents in Australian hospitals: Availability, performance and barriers to implementation.* British Journal of Clinical Pharmacology. **88**(2): p. 669-679.DOI: 10.1111/bcp.14995

PRESENTATIONS:

1. **Gauld, L.**, G. Kyle, A. Poudel and L. Nissen. *Colony stimulation factors to treat febrile neutropenia: What do we know and what should we be doing?* Annual Meeting of the Multinational Association of Supportive Care in Cancer (MASCC) and International Society of Oral Oncology (ISOO), June 2021, Virtual Annual Meeting.
2. **Gauld, L.**, G. Kyle, A. Poudel, and L. Nissen, *Colony stimulating factors to treat febrile neutropenia: What do we know and what should we be doing?* Journal of Oncology Pharmacy Practice, 2021. **27**(2): p. 21-22.DOI: 10.1177/1078155220985357

3. **Williams, P.**, *Do you need TDM and dosing software to optimise antibiotic dosing, or are there alternatives?* Australian Society of Antimicrobials Hybrid Symposium, October 2021, Virtual Symposium.

POSTERS:

1. **Bennett K.**, A. Craswell, **B. Dalglish**, B. Morris-Smith, J. Hanson, T. Flynn, and M. Wallis, *The impact of automated medicine dispensing units on nursing workflow: A cross-sectional study.* Poster at The Society of Hospital Pharmacists of Australia (SHPA), Medicines Management Conference, 2021.
2. **Bennett K.**, A. Craswell, J. Hanson, **B. Dalglish**, M. Wallis, *Implementation of distributed automated medication dispensing units in a new hospital: Nursing and pharmacy experience.* Poster at The Society of Hospital Pharmacists of Australia (SHPA), Medicines Management Conference, 2021.

3. **Bennett K.** and **S. Kingscote**, *Penicillin allergy de-labelling at the front door – a pharmacists-led initiative*. Poster at The Society of Hospital Pharmacists of Australia (SHPA), Medicines Management Conference, 2021.
4. **Mayfield, K.**, H. Nguyen, C. Smith and T. Morris, *The impact and value of a pharmacist within a persistent pain management service*. Poster at The Society of Hospital Pharmacists of Australia (SHPA), Medicines Management Conference, 2021.
5. **Mayfield K.**, L. White, T. Nolan, X. Conner, B. Dittmer, C. Abi-Fares and A. Mitchell, *Management of surgical patients on opioid replacement therapy: An audit of current practice*. Poster at The Society of Hospital Pharmacists of Australia (SHPA), Medicines Management Conference, 2021.

Physiotherapy

Doctoral Students: Rebecca Caesar, Amanda Baker, Lisa Franks

Awarded PhD: Claire Stewart

Research interests/projects (2021)

PREMiME – Early prediction of typical outcome and mild developmental delay for prioritisation of service delivery for very preterm and very low birth weight infants (Rebecca Caesar)

GAME - harnessing Neuroplasticity to Improve Motor Performance in Infants with Cerebral Palsy: A Pragmatic Randomised Controlled Trial (Rebecca Caesar)

QEIDN - Queensland Early Detection and Intervention Network for children at risk of Cerebral Palsy (Rebecca Caesar)

AVERTDOSE - A Phase 3, Multi-Arm MultiStage Covariate-Adjusted Response-Adaptive Randomised Trial to Determine Optimal Early Mobility Training after Stroke (Elisabeth Lawson, Kate Walker)

The efficacy of telerehabilitation compared with centre-based community rehabilitation on time spent physically active in people with stroke: A pilot randomized controlled trial (Kate Walker)

Primary contact physiotherapy services for musculoskeletal conditions: Patient experiences and outcomes (Hamish Beal, Kath Conway)

Interdisciplinary person-centred goal setting in rehabilitation services across Queensland (Amanda Baker)

Effectiveness of a Physiotherapy- led Acute Knee Injury Clinic within a co-located Orthopaedic service: A retrospective service evaluation.

Evaluation of an Advanced-Practice Physiotherapist in an acute knee injury orthopaedic outpatient setting: Diagnostic Agreement and Effect on Wait Times.

PUBLICATIONS:

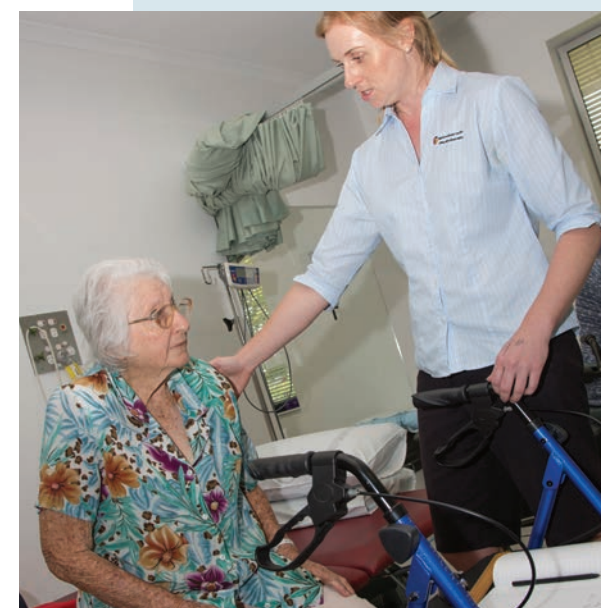
1. **Baker, A.**, P. Cornwell, L. Gustafsson, and N.A. Lannin, *An exploration of goal-setting practices in Queensland rehabilitation services*. Disability and Rehabilitation, 2021: p. 1-11.DOI: 10.1080/09638288.2021.1906957
2. **Caesar, R.**, P.B. Colditz, G. Cioni, and R.N. Boyd, *Clinical tools used in young infants born very preterm to predict motor and cognitive delay (not cerebral palsy): A systematic review*. Developmental Medicine & Child Neurology, 2021. **63**(4): p. 387-395.DOI: 10.1111/dmcn.14730
3. Harnischfeger, J., C. Knott, P. Ross, J. Lang, M. Mason, **K. McCleary**, D. Massey, and M. Cubitt, *Interprofessional Education in Critical Care: A Consensus Statement*. Australian Journal of Clinical Education, 2021. **8**(1): p. 1-11.DOI: 10.53300/001c.29569
4. Lago, A.F., A.J. Nicholson, J. Sivasuthan, A.C. Gastaldi, A. Bowen, A. Stratton, C. Tipping, C. Campbell, G. Pound, **K. McCleary**, L. Thomas, M. Nickels, M. Paykel, M. Shealy, and C. Hodgson, *The perceived*

barriers and facilitators to implementation of early mobilisation within a multicentre, phase 3 randomised controlled trial: A qualitative process evaluation study. Australian Critical Care, 2021.DOI: 10.1016/j.aucc.2021.06.008

5. **Rosbergen, I.**, **R. Grimley, C. Tracey, N. Greveling**, T. Russell, T. Comans, **K. Walker, J. Endacott**, and S. Brauer, *A co-design study to develop a prototype telerehabilitation intervention to increase physical practice after stroke*. International Journal of Stroke, 2021. **16**(1_SUPPL): p. 26-26
6. **Rosbergen, I.**, **I. Tonello, R. Grimley**, L. Munks, and R. Clark, *Unilateral and bilateral arm activity during rehabilitation in people with and without affected arm function*. International Journal of Stroke, 2021. **16**(1_SUPPL): p. 26-26

PRESENTATIONS:

1. **Caesar R.**, Boyd RN, Cioni G, Ware RS, **Doherty J, Jackson MP**, Salthouse KL, Colditz PB, *The PREMiME Study Group. Early detection of developmental delay in very preterm and very low birth weight infants*. Paediatric and Neonatal Quality Improvement Day, Patient Safety Week, 15 September 2021, Sunshine Coast University Hospital.
2. **Caesar R.**, Boyd RN, Cioni G, Ware RS, **Doherty J, Jackson MP**, Salthouse KL, Colditz PB, *The PREMiME Study Group. Early detection of developmental delay in very preterm and very low birth weight infants*. Allied Health Showcase, 16 November 2021, Sunshine Coast University Hospital. **Awarded Best Research Presentation**
3. **Caesar, R.**, P.B. Colditz, G. Cioni, and R.N. Boyd, *Clinical tools used in young infants born very preterm to predict motor and cognitive delay (not cerebral palsy): A systematic review*. Developmental Medicine & Child Neurology, 2021. **63**(4): p. 387-395.DOI: 10.1111/dmcn.14730
4. **Connell, A.**, *SCHHS Acute Knee Clinic: Physiotherapy-led service for acute knee injuries within an Orthopaedic screening service - an innovative partnership between Orthopaedics and Physiotherapy*, Queensland Musculoskeletal Physiotherapy Outpatients Network Conference, 3 September 2021, Royal Brisbane and Women's Hospital Conference Centre.
5. **Harrington, M.** and **K. McCleary**, *The development of a risk mitigation strategy and resources for staff and consumers to facilitate the safe delivery of insitu simulation to improve positive outcomes*. Poster presentation at SCHHS Patient Safety Week, 13-17 September 2021, Sunshine Coast University Hospital. https://qheps.health.qld.gov.au/_data/assets/pdf_file/0031/2692174/risk-mitigation-insitu-simulation.pdf
6. **McCleary, K.** and **S. George**, *SCUH COVID-19 Vaccination Clinic: Testing workflow design and safety using translational simulation*. Poster presentation at SCHHS Patient Safety Week, 13-17 September 2021. Sunshine Coast University Hospital. **Best Consumer Engagement Award**



Speech Pathology

RESEARCH CONTACT: Julie Scott julie.scott2@health.qld.gov.au

Number of staff actively involved in research: 13 – across acute, inpatient rehab, CSRT, Nambour Hosp and Gympie Hosp. Speech Pathologists and Clinical Assistants

Current research interests

- Study of feasibility, acceptability and potential effectiveness of Communication Access Training for Staff – project completed and write up commenced 2020
- Conversation Partner Training (CPT) Implementation Study – planning phase completed end of 2020, Implementation commenced start February 2021
- Aphasia recovery with Music exposure (AMP) Study – planning completed 2020, implementation commenced February 2021
- Co-design of aphasia services for the new Queensland Aphasia Rehabilitation Centre – early development stage 2020
- Comprehensive Aphasia Therapy (CHAT) Program Study – development phase 2020

Top research publications and presentations in 2021:

1. Shrubsole, K., T.-J. Lin, C. Burton, **J. Scott**, and E. Finch, *Delivering an iterative Communication Partner Training programme to multidisciplinary healthcare professionals: A pilot implementation study and process evaluation*. International Journal of Language & Communication Disorders, 2021. **56**(3): p. 620-636. DOI: 10.1111/1460-6984.12618
2. **Scott, J.**, and K. Shrubsole, *Communication is everyone's business: Collaborative working to develop effective MDT education in communication access that opens doorways into healthcare conversations for patients with communication difficulties*. Presentation at SCHHS Health Symposium, March 2021, Sunshine Coast Health Institute.
3. **Scott, J.**, and K. Shrubsole, *Communication is everyone's business: Collaborative working to develop effective MDT education in communication access that opens doorways into healthcare conversations for patients with communication difficulties*. Presentation at Smart Strokes Conference, August 2021
4. **Scott, J.**, and K. Shrubsole, *Communication is everyone's business: Collaborative working to develop effective communication access into healthcare conversations*. Presentation at Queensland Rehabilitation Physiotherapy Network Conference, October 2021.

Community and Preventive Health



Dr Marco Giuseppin
Clinical Director Community and Preventive Health

2021 General Manager Research Report

RESEARCH CONTACT: Dr Roderick McClure

Research culture / capability (2021)

Doctoral Students: Rhonda Dryland, Wendy Kinton, Christopher Martin

Masters Student: Suzanne Robson

Research activity 2021

- Australian HIV Observational Database (AHOD) (the Kirby Institute, UNSW) – Dr David Sowden (Infectious diseases), Dr Kuong Taing and Paul Smith (Sexual Health)
- Breast cancer detection rates in high-risk groups of women participating in mammography screening - Dr Alison Roper (Breastscreen)
- Evaluation of the Statewide Rural and Remote Supportive and Specialist Palliative Care Telehealth (SPARTA) Service – Dr Prem Ram (Palliative Care)
- Experiences of emergency department nurses using a dedicated palliative care resource and associated tools in the provision of quality care to a dying patient – Suzanne Robson (Palliative Care)
- Palliative Care Outcomes Collaboration (PCOC) – Dr Maureen Mitchell (Palliative Care)
- Quality of dying audit – Wendy Kinton, Dr David Gutierrez, and Dr Greg Plowman (End of Life Care)
- Quality of life for palliative patients and their families, the role of Acceptance and Commitment therapy – Chris Martin (Palliative Care)
- Rapid Response Pharmacovigilance in Palliative Care – Dr Louise Welch (Palliative Care)

PUBLICATIONS:

1. **McClure, R.J.**, *Covering the territory: Can Injury prevention do better?* Injury Prevention, 2021. **27**(4): p. 299. DOI: 10.1136/injuryprev-2021-044347
2. **McClure, R.J.**, *Grand challenges and global solutions: where does injury prevention fit in?* Injury Prevention, 2021. **27**(5): p. 399. DOI: 10.1136/injuryprev-2021-044400
3. **McClure, R.J.**, *Injury prevention decision science*. Injury Prevention, 2021. **27**(3): p. 207. DOI: 10.1136/injuryprev-2021-044268
4. Occhipinti, J.-A., A. Skinner, S. Carter, J. Heath, K. Lawson, K. McGill, **R. McClure**, and I.B. Hickie, *Federal and state cooperation necessary but not sufficient for effective regional mental health systems: insights from systems modelling and simulation*. Scientific Reports, 2021. **11**(1): p. 11209. DOI: 10.1038/s41598-021-90762-x
5. **Pearse, W., R. Saxon, G. Plowman**, M. Hyde, and F. Oprescu, *Continuing education outcomes for advance care planning: a systematic review of the literature*. Journal of Continuing Education in the Health Professions, 2021. **41**(1): p. 39-58. DOI: 10.1097/ceh.0000000000000323

PRESENTATIONS:

1. **Martin, C.**, and K. Pakenham, *The role of acceptance and commitment therapy for palliative patients' quality of life*. Poster presentation at Association for Contextual Behavioral Science Virtual World Conference 19, 24-27 June 2021, Virtual.
2. **McClure, R.**, *Leveraging systems thinking to build and maintain partnerships*. Closing Plenary at Southeastern and Southwestern Injury Prevention Network Annual Meeting, June 2021, North Carolina.
3. **McClure, R.**, *Topical issues, change, the future, and why Safety 2022*. Opening Address at Virtual Pre-conference Global Injury Prevention Showcase, World Health Organisation, Safety 2022. March 2021.

AWARDS:

1. **McClure, R.**, *Highly Commended, Real intelligence from artificial societies*, The Trinity Challenge 2021.



Professor James O'Beirne
Director Hepatology

Liver Disease Research

Coast set to benefit from \$450,000 spend on world-first research.

Professor James O'Beirne has received a \$450,000 research grant to improve health service planning and outcomes for non-alcoholic fatty liver disease (NAFLD) patients.

The grant, funded by the Sunshine Coast Hospital and Health Service (SCHHS) Study, Education and Research Trust Fund (SERTF) along with Wishlist, was awarded to SCHHS Professor James O'Beirne, who said his research would result in valuable, world-first data.

- Unfortunately, NAFLD is highly prevalent in our community affecting 30 per cent of the adult population, and its incidence is increasing with more and more people now affected by liver cancer and late stage scarring of the liver.
- It will be sometime before we have drugs that can successfully treat NAFLD, so we need to plan services that are responsive, accessible and most of all acceptable to patients.
- Through interviews with people diagnosed with NAFLD, we will, for the first time in Australia and overseas, explore patients' perspectives about their supportive care needs, for example their health and emotional concerns, as well as their practical concerns about managing their condition.
- Through population-based linked data we will also be able to describe for the first time the patterns of resource utilisation and health service costs of patients with NAFLD.
- The studies will provide important information to guide health service planning for this patient group across the Sunshine Coast, and Queensland generally. We will identify deficiencies and

inefficiencies in the healthcare system that may adversely affect patient outcomes and suggest mechanisms for improvement. Our studies will also include a review of healthcare disparities between regional and metropolitan services.

- Australia is uniquely challenged by its geography with many patients living far from metropolitan centres where most tertiary liver centres are based. Historically, this has led to significant disadvantages for patients living in regional settings.
- Developing appropriate evidence-based care pathways and interventions will increase patients' access to care and reduce inefficiencies and inequalities in NAFLD care and deliver the best outcomes for the most patients at the lowest cost.

The SCHHS SERTF scheme is a long-standing initiative, which in 2021, with the support of Wishlist, funded 13 innovative and collaborative research projects, totalling \$1.7 million.

Professor O'Beirne, who was awarded his grant in collaboration with Metro South Hospital and Health Service and QIMR Berghofer Medical Research Institute, said the grant meant a lot to him and the SCHHS hepatology team based at Sunshine Coast University Hospital.

We have worked hard to develop a comprehensive hepatology service and a key component of that is research. Having active, collaborative research projects within the department fosters a culture of quality, curiosity and scientific rigour and will enthuse the next generation of clinician-scientists.



Dr Myo Min
Staff Specialist Radiation Oncology

New clinical trials set to benefit local cancer patients

For the first time in Australia, patients with advanced head and neck cancer and rectal cancer will be able to benefit from a new treatment being investigated by the Sunshine Coast Hospital and Health Service (SCHHS) oncology team.

Thanks to a \$450,000 research grant awarded to SCHHS Staff Specialist Radiation Oncology Dr Myo Min, the health service will this year launch four innovative radiotherapy studies and be able to employ a dedicated research radiation therapist to help deliver them.

Dr Min said some local cancer patients for whom surgery or chemotherapy was not suitable would benefit most from the treatment their team was investigating.

"We believe that the cancer outcome as well as quality of life for these patients will be improved by our proposed treatments, which are currently not investigated or available in any other Australian cancer centre," he said.

"We have an MRI (magnetic resonance imaging) simulator at the Adem Crosby Centre, which allows us to scan patients in the radiotherapy position to better understand their treatment requirements and thereby improve the quality of radiotherapy targeting.

"Our research team will investigate the role of functional MRI in personalised radiotherapy in patients with head and neck cancer, and locally advanced rectal cancer.

"Functional MRI can provide detailed information of cancer behaviour or aggressiveness and help map these areas, allowing clinicians to increase a radiotherapy dose at resistant tumour locations, while minimising doses of radiotherapy to healthy tissue and other important regions of the body.

"The research grant (funded by the SCCHS Study, Education and Research Trust Fund – SERTF – and Wishlist) is incredibly important because it will allow us to onboard a full-time research radiation therapist who will co-ordinate the specialised and complex radiation plans for these clinical trials.

"According to evidence-based guidelines and protocols, clinical trials are one of the best options to maintain and improve the quality of care provided to our patients.

"While we will continue to provide standard radiation therapy treatments to the majority of our patients, those patients who are eligible for our studies will be offered the chance to participate, to improve their cancer outcome and long-term quality of life.

"Such research opportunities ensure cancer patients in the Sunshine Coast and Gympie regions are being offered high quality, evidence-based, personalised cancer care at a tertiary level.

"Our team at SCHHS is leading the way in regards to this novel research field. Our region is experiencing rapid growth and we need to be responsive to the increasing health needs of our growing and aging community.

"Our research group also includes a strong collaboration with the University of the Sunshine Coast's Thompson Institute," Dr Min said.

SCHHS Chief Executive Dr Peter Gillies agreed and said the SERTF research grants ultimately resulted in improved health outcomes for the Sunshine Coast community.

"We're proud to have a clinical and research portfolio at SCHHS that is comparable to other major centres in Australia. These grants support our clinicians financially and practically and inspire a commitment to excellence in healthcare through research and innovation."

"By driving departments to elevate their outcomes we are ensuring our patients receive the best care possible," Dr Gillies said.

Wishlist CEO Lisa Rowe said the not-for-profit charity strongly believed in fostering the research culture of the local health service.

"We have directed more than \$2 million in the past several years to support and develop medical research on the Sunshine Coast and intend to grow our research investment into the future," Ms Rowe said.



Mental Health and Specialised Services

Research Contact: Shuron Bullman

Research Contact: SC-MHSS-Research-Governance@health.qld.gov.au

Doctoral Students

PhD Candidate: Introduction of a new therapy of Cognitive Behaviour Therapy for Avoidant Restrictive Food Intake Disorder in the Eating Disorder Service Sunshine Coast by Copeland Winten (Senior Dietitian).

PhD Candidate: The Development, Validation, and Application of an Ego-State Scale by Nicholas Zammit (Clinical Psychologist) Child and Youth Mental Health Service.

MHSS Research Vision:

To build a sustainable foundation to support a vibrant research culture within MHSS actively involved in strategic research projects for the benefit of our community, consumers and carers and advancement of knowledge translation into better mental health outcomes.

Specific targets for increasing research activity include:

- Building research skills amongst MHSS staff
- Supporting investigator-led research in an interprofessional research model
- Embedding and sustaining new knowledge into clinical care through knowledge translation practices
- Working alongside consumers and carers in identifying needs
- Build internal and external research networks and collaborations

Research projects (2021)

Experiences of Supported Accommodation for people with a Mental Illness by Fiona Jarret (Master of Philosophy) research student.

This research seeks to understand the experiences of people with severe and enduring mental illness and their experiences of disrupted housing and supported accommodation. This research has been undertaken within the conceptual framework of a systems theory approach incorporating the individual as they navigate housing, health, community support and welfare systems, the illness and accommodation challenges they face, the policies that impact on their individual journeys, and the supports and community connectedness that impact on their overall experiences.

The Kids are not ok: Emergency Department management of acute mental health crises in children and young people – a retrospective study (in progress).
Authors: Members of the Paediatric Research in Emergency Departments International Collaborative.

Recently there has been an alarming increase in emergency department (ED) mental health presentations (self-harm, depression, and behavioural disorders) by children and adolescents. For young people, EDs are increasingly an initial or recurrent point of contact with the mental health system. Despite the mental health crisis for young people presenting to EDs across Australia, currently very little is known about the patterns, triggers, healthcare costs, and outcomes for these vulnerable patients.

The Mental Health Retrospective Study is part of “The Kids are Not okay” program of research. The Retrospective study specifically aims to describe, in different settings and types of EDs: (a) current patterns and precipitants of ED mental health presentations; (b) prevalence of co-morbid conditions; (c) factors (including demographic, family and other social factors) associated with mental illness and suicidality; and (d) the care provided within the ED and on follow-up.

- **Evaluation of Queensland Mental Health Community Support Services (MH CSS) programs**

Authors:

Queensland Centre for Mental Health Research

The Mental Health and Other Drugs Branch commissioned Queensland Centre for Mental Health Research (QCMHR) to conduct an independent evaluation of the Queensland MH CSS programs. MH CSS programs are non-clinical, holistic recovery-focused psychosocial wraparound support services delivered either one-to-one, peer-to-peer, or within a group, based on an individual’s recovery needs.

The evaluation focused on understanding the effectiveness of the following four (4) programs: The Individual Recovery Support Program, Group Based Peer Recovery Support Program, The Individual Recovery Support – Transition from Correctional facilities Program and Individual at Risk of Homelessness Program. Findings will be released in 2022.

- **State-wide Audit of Psychotropic Prescribing (SWAPP) - A cross-sectional pilot study of antipsychotic use among public health services in Queensland** (in-progress). Authors: Korinne Northwood¹, Anjela Pham-Nguyen², Minnie Park³, George Ma³, Caroline Chiu⁴, Andrew Dacey⁵, Shirlony Morgan^{*}

High dose antipsychotic therapy, with or without polypharmacy, remains a common practice in Australian psychiatric prescribing, despite evidence that suggests it has limited efficacy for treatment and confers increased risks to patients. As part of the work of Queensland Psychotropic Medications Advisory Committee, an expert committee on quality use of medicines in QLD, we are undertaking a SWAPP as a cross-sectional pilot study on antipsychotic use in public inpatient mental health facilities across the state. This study will provide insight into current prescribing practice, including inter-site factors which may affect medication use, and support development of guidelines or initiatives to support more evidence-based antipsychotic prescribing.

Left below: Sunshine Coast University Hospital Mental Health Team.



ICU Nursing Research Priorities

Partnering with consumers occurs when the health system, health service organisations and clinicians work in collaboration with consumers with the aim of improving patient experience and outcomes. The **ICU Research Priorities Study**, led by Associate Professor Frances Lin (USC Collaborator) together with Intensive Care Unit (ICU) Research Coordinators Lauren Murray and Jane Brailsford as Principal Investigators, created an opportunity to engage with consumers representatives who played a vital role as participants in their priorities study.

To initially engage consumers, the ICU Research Coordinators reached out to past research participants and the SCHHS Consumer Research Engagement Group presenting at their consumer meeting. Consumer representatives were given an in-depth overview of the ICU, our patient population, and common presentations we see here on the Sunshine Coast. We covered the types of research we currently undertake and how it relates to our patient populations. A/Prof Frances Lin presented the Research Priorities Study and the vital role the consumer can play. The feedback was very encouraging, and consumers were happy to support.

The ICU Research Priorities Study offered us an opportunity to engage with ICU consumer representatives and multidisciplinary ICU clinicians to establish a set of common priorities applicable to ICU research. Patients admitted into ICU are at a relatively higher risk of adverse events and clinical deterioration than other patients because they are typically more seriously ill than those admitted into other hospital wards. Improving the safety and quality of care provided to critically ill ICU patients is therefore a high priority for healthcare organisations. Currently, there are no clearly established **nursing research programs** to guide evidence-based care in most ICUs at Queensland hospitals in the Moreton Bay to Fraser Coast region, including Sunshine Coast University Hospital, Hervey Bay Hospital, Caboolture Hospital, and Redcliffe Hospital.

Between May - July 2021 SCUH ICU lead this multicentre study across three hospital and health services with designated Investigators at each site. This was a mixed-method, three phase study which included Phase 1: development of the initial research topic list; Phase 2, a two-hour priority setting workshop at each site; and Phase 3, focus groups and interviews at each site. We adapted the process used by the James Lind Alliance in their critical care priority setting research in the UK. Staff and consumers decided the priorities which will be used as a template to guide a comprehensive program of nursing research for long-term evidence-based ICU practice and policy. Importantly we want to encourage nurses to become involved in undertaking research to build future clinical nursing research capacity as a foundation for excellence in patient care and ICU patient outcomes.

We have been fortunate enough to present this study design, concept, and implementation at both the Queensland Critical Care Research Forum

and the British Association of Critical Care Nurses Conference (session on 'Developing Nurse Led Critical Care Researchers Across the World'). This project will make a significant contribution to the literature and will provide important foundational work to direct clinical nursing research, practice and policy in regional ICUs and optimise patient care and outcomes.

The connections formed with Consumers during this project has continued. We are underway with a grant application for a study that has stemmed from these results and have a very keen Consumer who is joining us from conception on our upcoming grant application. We look forward to strengthening our consumer network as we embed **partnering with consumers** in all things research.



Women's and Children's Services

Research Contact Roni Cole

Research Contact: roni.cole@health.qld.gov.au

RESEARCH GRANTS

Grants

Jenkins, A. (2021) Clinical Researcher Fellowship. Mindfulness-Based group interventions for mental health concerns in the pregnancy: A mixed methods study. \$75,000.00

Nugent, R. (2021) Clinical Researcher Fellowship. Exploring BMI > in Pregnancy - Experience, Intervention, Outcomes. \$149,687.00

Thomas, C. (2021) Clinical Researcher Fellowship. Evaluation of a paediatric inter-facility initiative for acutely unwell children in regional Queensland: Standardised Workflow for Inter-Facility Transfer of Kids. \$150,000.00

Ng, B. (2021) Departmental Capacity Building Seed Grant. Generating Research to improve Outcomes for Women: GROW Project. \$47,729.22

Nugent, R. (2021) Clinical-Academic Collaborative PhD Scholarship Program. Optimising spontaneous vaginal birth in nulliparous women. \$42,895.50

Research Higher Degree Students

Amber Jenkins (Midwife)

Clare Thomas (Paediatrician)

Deyna Hopkinson (Midwife)

Josie Greaves (Midwife)

Julie Creen (Paediatric Occupational Therapist)

Michelle Elks (Paediatric Nurse)

Rachael Nugent (Obstetrician and Gynaecologist)

Rebecca Caesar (Paediatric Physiotherapist)

Rebecca Halsall (Paeds CNC)

Roni Cole (Paediatric Nurse)

RESEARCH SUMMARY (2021)

The Women's and Children's Services continues to be proactive and generate significant research activity, with aims to continue to grow research capability and outputs. During 2021 several research projects were completed and published, along with a number of new local investigator led studies being commenced. There was a total of 51 studies in the paediatric, neonatal, obstetric and midwifery fields of research; 5 studies were in development and being prepared for site specific approval, 33 studies actively running, and 13 studies were completed and/or findings published.

Most of the projects within WCS have a strong inter-professional focus with representation from the inter-disciplinary team. Numerous staff within WCS are

actively involved in research with 10 clinicians currently undertaking higher-degrees by research. Of these, three received Clinician Researcher Fellowships. Dr Emma Seed was awarded the Coverdale-Anstey Young Investigator Award for her research examining all risk waterbirth – ‘Taking the Plunge: Water immersion for labour a birth: A prospective study’.

The vision for WCS departments is to continue to grow research capacity and capability among clinicians developing a progressive and definitive research strategy for each of our service divisions: paediatrics, neonatal, obstetrics and midwifery. Women’s and Children’s Services aim to develop a multidisciplinary community and culture of research practice to increase research awareness and engagement through creating a peer network which provides support and mentorship to emerging and early-career researchers.

PUBLICATIONS

1. Baxter, H., E. Carter, K. Marris, **R. Nugent**, and **E. Weaver**, *Effect of surgeon volume on long-term quality of life outcomes following tension-free vaginal tape surgery*. International Urogynecology Journal, 2021. DOI: 10.1007/s00192-021-04714-0
2. **Caesar, R.**, P.B. Colditz, G. Cioni, and R.N. Boyd, *Clinical tools used in young infants born very preterm to predict motor and cognitive delay (not cerebral palsy): A systematic review*. Developmental Medicine & Child Neurology, 2021. **63**(4): p. 387-395. DOI: 10.1111/dmcn.14730
3. **Cole, R.**, **J. Young**, **L. Kearney**, and J.M. Thompson, *Priority setting: Consensus for Australia’s infant safe sleeping public health promotion programme*. Journal of Paediatrics and Child Health, 2021. **57**(2): p. 219-226. DOI: 10.1111/jpc.15178
4. **Cole, R.**, **J. Young**, **L. Kearney**, and J.M.D. Thompson, *Awareness of infant safe sleep messages and associated care practices: Findings from an Australian cohort of families with young infants*. BMJ Paediatrics Open, 2021. **5**(1). DOI: 10.1136/bmjpo-2020-000972
5. **Cole, R.**, **J. Young**, **L. Kearney**, and J.M.D. Thompson, *Challenges parents encounter when implementing infant safe sleep advice*. Acta Paediatrica, 2021. **110**(11): p. 3083-3093. DOI: <https://doi.org/10.1111/apa.16040>
6. Craswell, A., **L. Kearney**, **J. McAtee**, M. Hadland, W. Smyth, and C. Nagel, *Impact of Electronic Medical Records Within the Maternity Environment: An Ethnographic Exploration of Midwifery Practice*. Studies in Health Technology and Informatics, 2021. **284**: p. 528-530. DOI: 10.3233/SHTI210788
7. **Green, J.**, A. Kennedy-Behr, **K. Gee**, **L. Wilks**, and M. Verdonck, *Reducing time between referral and diagnosis in paediatric outpatient neurodevelopmental and behavioural clinics*. Journal of Paediatrics and Child Health, 2021. **57**(1): p. 126-131. DOI: 10.1111/jpc.15156
8. Flenady, V., **I. Kettle**, J. Laporte, D. Birthisel, L. Hardiman, A. Matsika, N. Whelan, C. Lehner, D. Payton, M. Utz, A.M. Wojcieszek, H. Lawford, T. Walsh, and D. Ellwood, *Making every birth count: Outcomes of a perinatal mortality audit program*. The Australian & New Zealand Journal of Obstetrics & Gynaecology, 2021. **61**(4): p. 540-547. DOI: 10.1111/ajo.13325
9. Jenkinson, B., **L. Kearney**, M. Kynn, R. Reed, **R. Nugent**, J. Toohill, and F. Bogossian, *Validating a scale to measure respectful maternity care in Australia: Challenges and recommendations*. Midwifery, 2021. **103**. DOI: 10.1016/j.midw.2021.103090
10. **Kearney, L.**, A. Craswell, D. Massey, N. Marsh, **R. Nugent**, C. Alexander, **C. Smitheram**, **A. McLoughlin**, and A. Ullman, *Peripheral intravenous catheter management in childbirth (PICMIC): A multi-centre, prospective cohort study*. Journal of Advanced Nursing, 2021. **77**(11): p. 4451-4458. DOI: 10.1111/jan.14933
11. **Nelson, P.** and **R. Nugent**, *The association between sonographic fetal head circumference, obstetric anal sphincter injury and mode of delivery: A retrospective cohort study*. Australian & New Zealand Journal of Obstetrics & Gynaecology, 2021. **61**(5): p. 722-727. DOI: 10.1111/ajo.13342
12. **Woolfield, A.**, **F. McIndoe**, **E. Ryan**, and **L. Watkins**, *Association between volume of fluid resuscitation in the management of postpartum haemorrhage and maternal morbidity*. Australian and New Zealand Journal of Obstetrics and Gynaecology, 2021. **61**(SUPPL 1): p. 133-134. DOI: 10.1111/ajo.13345
13. Smith, K., **R. Nugent**, and X. Wu, *Introducing eras to a large regional hospital: Phase 1*. Australian and New Zealand Journal of Obstetrics and Gynaecology, 2021. **61**(SUPPL 1): p. 111. DOI: 10.1111/ajo.13345
14. **Watkins, L.**, **L. Kearney**, M. Kynn, **C. Hodgman**, and **R. Nugent**, *Implementation of a guideline of early administration of tranexamic acid for severe primary postpartum haemorrhage: a retrospective comparative study*. The Australian & New Zealand Journal of Obstetrics & Gynaecology, 2021. **61**(3): p. 354-359. DOI: 10.1111/ajo.13282
15. **Woolfield, A.** and **R. Nugent**, *A case of retinal tears during the second stage of labour*. Australian and New Zealand Journal of Obstetrics and Gynaecology, 2021. **61**(SUPPL 1): p. 134. DOI: 10.1111/ajo.13345



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Sunshine Coast Health Research Publications

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Conference Abstracts Posters and Presentations

Congratulations to the staff of SCHHS for successfully publishing their articles and abstracts in world wide journals.

What an achievement!



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