



Townsville
Hospital
and Health
Service

Research Annual Report 2019





Townsville Hospital and Health Service Research Annual Report 2015/16
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Message from the Health Service Chief Executive

Research is a vital component of the Townsville Hospital and Health Service's strategic vision to be a leader in healthcare in Northern Australia. I am delighted to contribute this foreword to the health service's Research Annual Report highlighting our research successes and achievements in 2019.

The opening of the \$4.4 million Townsville Institute of Health Research and Innovation in March was a significant step in our journey toward creating a vibrant, contemporary environment to cultivate and expand our research capability. The institute provides a state-of-the-art setting for local researchers and collaborators, including neighbouring James Cook University, to undertake their research and clinical trials. The launch of TropiQ, a health and knowledge precinct establishing our city as an international leader in tropical medicine and intelligence, was further testimony to the importance of research and its role in helping the world access, understand, and benefit from discoveries in health, tropical science, and medicine.

I'm very proud of the investment of the HHS in awarding Study, Education and Research Trust Account (SERTA) grants to our staff. In 2019, more than \$500,000 was awarded to local researchers for topics that included sensory experience in childbirth, clinical pathways for diagnosing and referring people with cognitive impairment, and the role of cigarette smoke on oral-pharyngeal cancer stem cells. This bespoke program has enabled more HHS staff to become involved in research and is the centrepiece of our commitment to local research investment.

The HHS also enjoyed success at the Queensland Health Awards in 2019 taking out the awards for Pursuing Innovation and the Minister's Award for Outstanding Achievement for 'Babycam', a local research and technology collaboration with Townsville University Hospital's neonatal unit, James Cook University, and CSIRO that connected families to their pre-term and critically unwell babies via a smart device application. This type of innovation and collaboration is emblematic of what can be achieved when research is championed.

Congratulations and thank you to all our researchers whose passion and commitment paves the way for a better, healthier future for us all.

Kieran Keyes

*Health Service Chief Executive
Townsville Hospital and Health Service*

Message from the TRESA Unit Manager & Research Governance Officer

Research at Townsville Hospital and Health Service (THHS) continues to go from strength to strength, building on its collaboration both nationally and internationally. Townsville HHS is a leading partner in the Tropical Australian Academic Health Centre (TAAHC), which in 2019 submitted a successful application for accreditation by the National Health and Medical Research Council (NHMRC) as a Centre for Innovation in Regional Health. Centres for Innovation in Regional Health are collaborations between research organisations, health care providers and educational institutions, developed to improve health care in their communities by delivering innovative, research-based health care and training. TAAHC is one of only three centres accredited by the NHMRC.

Unfortunately, the floods in Townsville in early 2019 significantly impacted on both the number of research studies submitted for Townsville HHS authorisation and the number of HHS Study, Education and Research Trust Account (SERTA) research grant applications. A total of eighteen valid SERTA grant applications were received with thirteen being awarded, totalling \$521 500 in funding. A large majority of the research applications aligned to the organisational objectives, focusing on excellent health services and patient outcomes, developing our workforce capability, fostering emerging talent and providing safe and efficient services.

In recognition of the requirement for some medical staff undertaking specialist college training to undertake a research project as a mandatory component of their course a new initiative was the introduction of an HHS Registrar SERTA research grant funding round. Six grants were awarded totalling \$24 118.

Once again Townsville HHS hosted its two-day Research Showcase with four internationally known keynote speakers. Dr Peter Lazzarini spoke on his research interests in the epidemiology and treatment of diabetic foot disease, including research that prevents diabetic foot disease hospitalisation and amputation. Professor Sue Kildea and Associate Professor Yvette Roe spoke on a new framework that has been developed to assist in driving maternity services reform for the best start in life for Aboriginal and Torres Strait Islander families. Professor James Elliott spoke on his research journey from a clinician with an enquiring mind to an internally recognised researcher external with recognition as a global expert in whiplash injuries. Researcher from all disciplines presented 28 oral presentations and 38 poster presentations.

Unfortunately, Townsville HHS lost its Director of Clinical Research, Professor Damon Eisen, who relocated back to Melbourne at the end of 2019. The HHS looks forward to the appointment of a new Director and continued expansion of research.

Sue Jenkins-March

Manager, Townsville Research Education, Support & Administration and Research Governance Officer



Research institute a game-changer for North Queensland

The \$4.4 million research institute at The Townsville Hospital is set to further establish Townsville as Northern Australia's premier health and knowledge centre.

On 6 March 2019, Minister for Communities and Minister for Disability Services and Seniors Coralee O'Rourke opened the Townsville Institute of Health Research and Innovation (TIHRI).

Ms O'Rourke said research was a key pillar of the Queensland public health system and was essential in meeting growing demand for services. "Every year, more and more people look to the public health system for care, and health research is essential in finding new and innovative ways to meet this demand," she said. "This space is about providing a modern environment for our hardworking health staff to conduct world-leading research surrounded by all the necessary supports. The goal is that one day the work done at this institute will lead to breakthroughs that help improve the way we care not just for Queenslanders but for all." Townsville Hospital and Health Service Board Chair Tony Mooney said health professionals had punched above their weight in delivering nationally recognised

research. "The research outcomes from this organisation have come from doctors, nurses and allied health staff conducting their work in staff rooms and corners of their offices," he said. "In this new facility, our researchers will have access to all our research support staff who can provide advice about governance, ethics and attracting funding. "We also have a dedicated area for clinical trials." Tony said Townsville researchers had pioneered major research breakthroughs that have led to delivering chemotherapy via telehealth, using technology to reduce rates of preventable amputations in diabetics and world-leading treatment methods for jellyfish stings.

"While the big cities in Australia have the population advantage, we have unique health research opportunities in North Queensland that are comparable world-wide," he said. "By providing a modern, on-site research space and by working with our neighbours at James Cook University we will be able to attract the best and brightest researchers. "This is another major step towards solidifying Townsville as the health and knowledge precinct of Northern Australia." TIHRI includes space for clinical trials, research, education and support staff as well as study areas for researchers from both Townsville Hospital and James Cook University.

Message from the Human Research Ethics Committee Chair

Chairing a Human Research Ethics Committee (HREC) is stimulating, rewarding, satisfying and hugely enjoyable. While my tenure as the THHS HREC Chair was short, I can reflect on the positive experience for which I maintain as an ordinary member of the HREC to this day. Let's be honest, HREC decisions are rarely clear approvals or rejections but tend to be conditional: of the 'not yet approved' kind. My primary aim while in the role of HREC chair was to provide clear reasons and practical advice: I believe committees show respect for researchers by providing reasons for the outcome and advice about responding. At the same time, outcomes should fairly reflect the position that the committee has come to – and this can be difficult.

My secondary aim as HREC chair was summarising fairly and accurately what different members of the committee have said and blending those into a reasonably clear outcome that the HREC can agree to at the meeting. Some trends that I have observed emerging include:

- does the proposal have value and validity and, if not, what do we need to know to be satisfied that it does?
- what risks to participants or others does the project involve; how is it planned they will be mitigated and are we satisfied with the level of mitigated risk?
- how are participants being recruited and how is their consent being sought, gained and recorded?
- are there issues of fairness in the imposition of burdens of participation on a particular population?

I consider myself fortunate to have worked with what is considered the benchmark Australian HREC. Our committee is certified at the highest level in Australia and so is able to evaluate the most complex research applications across a range of study designs. Some achievements along the way include the introduction of paperless for low risk submissions, thus reducing burden on researchers. Further was the interpretation and implementation of the Human Rights Act (2019). This act required the HREC to review, assess and develop policies, procedures and protocols, provide education and training, adapt our complaints processes and update our reporting systems.

If you would like more information on the Human Rights covered by the act, here is the link: https://qheps.health.qld.gov.au/tville/district_info/human-rights.

I am confident in the direction and leadership going forward for the THHS HREC. We welcomed Dr Hudson Birden to the role of HREC chairperson when I accepted the position of Director of Pharmacy late in 2019. Hudson has vast experience in the research field not only within Australia but abroad. He has previously been a director of public health in Connecticut in the United States before moving to Australia in 2002. Hudson also lectures in public health at the University of Sydney, and has a long association with the HREC, having served as a member since 2014 before assuming the Chair role on 20 February 2020. I also want to acknowledge the extraordinary work Sara Potts, our Ethics Co-Ordinator, does in the background. Sara is the foundation and backbone of this committee and I consider THHS very lucky to have such a passionate and driven Ethics Co-Ordinator.

Lastly, I can feel and see the culture transformation within THHS accepting research as part of normal role responsibilities. I'm proud of the role the THHS HREC has played in influencing early adopters to embed research as part of key performance indicators and everyday workload. I thank those who put faith in me and supported me while in the role of HREC chair. I look forward to many more collaborations into the future.

Dr Kelvin Robertson
Chair, THHS HREC

2019 Townsville Health Research Showcase

The 2019 Health Research Showcase featured a dynamic group of guest presenters who travelled to Townsville to present speeches and workshops.

They offered a unique opportunity to THHS staff, collaborators and stakeholders to learn from external researchers on the cutting edge of their respective fields.



Dr Peter Lazzarini, Principal Research Fellow with Queensland Health and Queensland University of Technology (QUT) in Brisbane presented a keynote speech on his research journey, practicing for more than 12 years as a clinical podiatrist managing patients with foot disease at Queensland Health, he began his research career in 2011 and completed his PhD on the burden of foot disease in inpatient populations at QUT in 2016. Dr Lazzarini presented a workshop on Diabetic Foot Disease, exploring international research and guidelines surrounding the global and national burdens and strategies for DFD and tools, tests, and technologies for future management.



Prof James Elliott completed his PhD at the University of Queensland (UQ) in 2007 and a post-doctoral fellowship (2010) at UQ's CCRE-Spine. A Professor of Allied Health in the Faculty of Health Sciences at the University of Sydney. He spoke on how his work has resulted in external recognition as a global expert in neck pain (broadly) and whiplash injuries (more specifically). He also presented an innovative participatory workshop to provide participants with the opportunity to learn, apply, and interpret new research and clinical knowledge to optimise outcomes of traumatic and non-traumatic neck pain such as whiplash-associated disorder and idiopathic neck pain.

Prof Sue Kildea and **Assoc. Prof Yvette Roe**, co-directors of the Molly Wardaguga Research Centre at Charles Darwin University spoke and presented together on their research around midwifery for Aboriginal and Torres Strait Islander women. They presented a workshop on "Health Services Research Using the RISE Framework to redesign maternity services for the best start in life for Aboriginal and Torres Strait Islander families".

Prof Kildea is an internationally renowned midwifery and health services researcher with collaborative projects across Australia, Canada, Sweden and the UK.



Assoc. Prof Yvette Roe is a Njkenawu woman from the West Kimberley region, Western Australia with more than 25 years' experience working in the Indigenous health sector. A/Prof Roe was awarded her PhD, from the University of South Australia in November 2015.



2019 Townsville HHS Research Showcase Awards

The THHS Research Showcase had an outstanding number of very high-quality abstracts submitted and presented.

The best presentations were awarded to:

- Best poster presentation 2019. Experiences of an Occupational Therapy Led Paediatric Burns Telehealth Clinic: Family and clinician's experiences. Lauren Matheson
- Best oral presentation Monday 28th October 2019. Rhetoric and reality: experiences and drivers of Aboriginal and Torres Strait Islander Health Workers' practice in far north Queensland. Stephanie Topp
- Best oral presentation Tuesday 29th October 2019. Primary prevention Implantable Cardiac Defibrillators: A Townsville District Perspective. Nathan Engstrom
- Best oral presentation Wednesday 30th October 2019. Neonatal nurses' perceptions of using live streaming video cameras to view infants in a regional NICU. Michelle Evans & Michelle Baxter



Left to right: Lauren Matheson, Stephanie Topp, Michelle Baxter, Michelle Evans & Nathan Engstrom

2019 Study Education Research Trust Account Grants

The Townsville Hospital
and Health Service Study
Education Research Trust
Account awarded more than
\$500,000 to 13
experienced and novice
Researchers.

Prof Jonathan Golledge

***Metformin in the mAnaGement of abdomInal aortiC aneurysm.
Assessment of the efficacy of a novel treatment for Abdominal aortic
aneurysm – MAGIC***

Approximately 20 million people worldwide and 100,000 Australians, 20,000 of whom are from Queensland, have an abdominal aortic aneurysm (AAA) and these numbers are expected to double by 2040. The main complication of AAA, aortic rupture, leads to ~200,000 deaths/ year worldwide. This large randomised trial will definitively assess the ability of a drug, metformin, to prevent important AAA-related events.

Dr Sachin Nayyar

***Tissue microarchitecture-information based ventricular tachycardia
ablation***

Recurrent ventricular tachycardia (VT) is a major cause of death and significant source of health care utilization in patients with previous myocardial infarction and heart failure. Catheter ablation of VT has been shown to reduce VT recurrences. The researchers aim to conduct a larger prospective multicentre study and compare efficacy and safety of a new approach to VT ablation against the prevailing methods of VT ablation.



Ms Bronwyn Shirley

***Analysis of the impact of radiologist training on accuracy of pelvic
contouring.***

Radiotherapy is used to treat cancers. The most important aspect in ensuring the delivery of high-quality radiotherapy is accurately identifying the tumour to ensure it receives the intended dose of radiation. Inaccurate treatment can result in under-treatment of the cancer, impairing efficacy of treatment, or over-treatment of organs around the cancer, resulting in unnecessary side effects. The Elekta Unity is a new category of radiotherapy treatment device known as a MR Linac (MRL), being a hybrid of a linear accelerator and an MRI scanner. The Townsville Cancer Centre (TCC) is the first centre in the Southern hemisphere to install the Elekta Unity MRL and thus will be leading the national implementation in Australia. This study will evaluate the use of the MR Linac





Dr Tilley Pain

Identification of clinical pathways for the diagnosis and referral of people with mild cognitive impairment

Mild cognitive impairment (MCI) describes a period of subclinical cognitive decline associated with an increased risk of dementia. Its prevalence in Australia ranges from 6.7% for ages 60-64 to 25.2% for ages 80-84. Approximately 14% of people with MCI will progress to dementia. This study will employ a multi-stage survey methodology using the modified-Delphi technique to achieve expert opinion consensus on an effective clinical referral pathway for patients with mild cognitive impairment

Ms Amy Brown

Patient Preferences for Image Guidance Procedures during Radiation Therapy for Prostate Cancer: A Discrete Choice Experiment

Gaining perspectives from patients is important in healthcare provision and research and is increasing in the prostate cancer and radiation oncology setting. With rapid technological advances in radiation oncology it is important to gain patient perspective into different techniques and technologies to complement the clinical data. The aims of this project are to assess and understand prostate cancer patients' and wider community' preferences for image guidance procedures/techniques during radiation therapy treatment.



Ms Amanda Ostenski

Best practice in the use of an iEMR in a maternity care environment

Over the last decade information and communications technologies (ICT) including electronic health records (EMR) have been introduced to health services in many high-income countries including Australia and have transformed the delivery of healthcare. The aim of this study is to inform the best use of the iEMR in the maternity services environment. The objectives are to: Explore the impact of the iEMR on the woman-midwife relationship;

Describe the advantages/disadvantages of the iEMR on safety, quality, teamwork, and efficiency of care; Understand the impact of the iEMR on women's experience of care and Explore the impact of the iEMR on clinicians' practice.



Ms Sari Holland

An Immersive Sensory Experience during Childbirth: A proof of concept study

Women have repeatedly identified that the way the birth room looks has an impact on their experience and behaviour during labour and birth. There is a paucity of research to inform maternity clinicians regarding sustainable innovations in maternity design to promote birth physiology in a traditional birth suite. The primary aim is to measure the impact of an Immersive Sensory Experience (ISE) in labour on the mode of birth of women using the intervention compared to those not using the intervention.

Dr Kylie Lopes Floro

The role of cigarette smoke on oral-pharyngeal cancer stem cells (CSCs) and their response to radiation therapy

In 2012, 442,000 cases of squamous cell cancers of the lip, oral cavity and oropharynx were diagnosed worldwide. This disease has significant personal and financial burden on the Australian population. This project examines the effect of cigarette smoke and nicotine on oral-pharyngeal cancer stem cells (CSCs). The researchers hypothesize that cigarette smoke and nicotine increase the number of CSCs prior to diagnosis and increase the likelihood that cancer cells de-differentiate into cancer stem cells in response to conventional RT



Mr Rudolf Schnetler

Machine learning to reduce over ordering of pathology tests

Townsville HHS now uses an integrated electronic Medical Record (ieMR). The science of machine-learning or artificial intelligence (AI) is being applied to electronic medical records (EMR), mostly in automated interpretation of diagnostic imaging. This project will explore the application of machine-learning to patient characteristics to assess suitability of diagnostic pathology testing. The project will research a highly specific scenario as proof of principle. This consists of over-ordering of viral hepatitis serologies in patients who develop abnormal liver function tests (LFT's) while in hospital.



Dr Arjun Chavan

BET L- POCUS: Brief Educational Training for Lung evaluation using point of care Ultrasound by undergraduate medical Students.

Point of Care Ultrasound (PoCUS) describes the use of a portable ultrasound (US) machine by a treating clinician at the patient's bedside. PoCUS performed by expert clinicians has been extensively studied and found to be equal or superior to traditional radiographic imaging for a number of diagnoses, with the added benefits of quicker time to results and lack of exposure to ionising radiation. No Australian studies have examined the ability for medical students to learn clinical PoCUS, and no studies have yet evaluated the ability of medical students to detect lung disease using lung ultrasound. The aim of this study is to investigate if using brief educational programs to teach clinical US to students is feasible, effective and more accurate than traditionally taught clinical examination





Dr Kate Hooper

Neck of Femur fracture pain management with ultrasound-guided single bolus versus repeated bolus Fascia Iliaca CatheterS in the Emergency Department: a double-blind, randomized controlled trial. (NOF-FICSED study)

Hip fractures affect 22,000 Australians every year, including nearly 200 who presented at the Townsville Hospital in 2018, and carry a 5% in-hospital mortality rate and a 15-20% one-year mortality rate. This study will compare repeated bolus fascia iliaca catheter local anaesthetic blocks (rbFIC) with a single bolus fascia iliaca catheter block (sbFIC) in emergency department pain management in adult patients with neck of femur fractures.



Ms Lauren Matheson

Evaluating the effectiveness of the redesign of acute occupational therapy services on medical wards at The Townsville Hospital and Health Service: Validation of an Occupational Therapy Needs Assessment Tool

Occupational therapists (OT's) in the acute physical hospital setting play a pivotal role in coordinating timely and safe discharges. Economic pressures on health care services have resulted in shorter length of stay and higher turnover in acute hospitals. The aim of this study is to test the validity and the reliability of the OT Needs Assessment Tool developed in a previous study. The researchers will determine if the tool can be used as a prioritisation tool for inpatients requiring OT services in an acute regional tertiary hospital.



Ms Louisa D'Arrietta

Exploring health professionals' motivation to undertake research in tropical North Queensland

This study aims to investigate what motivates and influences health professionals to undertake research in regional hospitals/ medical training sites. The study will specifically seek to identify the effect of research training including that provided by CHHS, MHHS and THHS, on the attitudes, experiences, motivation, perceived opportunities and barriers as measured by the uptake and retention of research active staff along the career pipeline.



National Recognition for Townsville Research

An Australian-first partnership between North Queensland hospitals making it easier for people in remote areas to access lifesaving drug trials has been recognised by the Australian Research Council (ARC) for its positive impact to the community.

The Australasian Teletrial Model developed by the Clinical Oncology Society of Australia has been operationalised by a collaboration between the Townsville Cancer Centre, Queensland Cancer Clinical Network and the Health, Innovation, Investment and Research Office of the Department of Health.

The model has, for the first time, made the latest drug trials more accessible for people in rural and remote North Queensland. Each year, the ARC rates research being done across Australian and provides a mark out of 100 for its impact to the community.

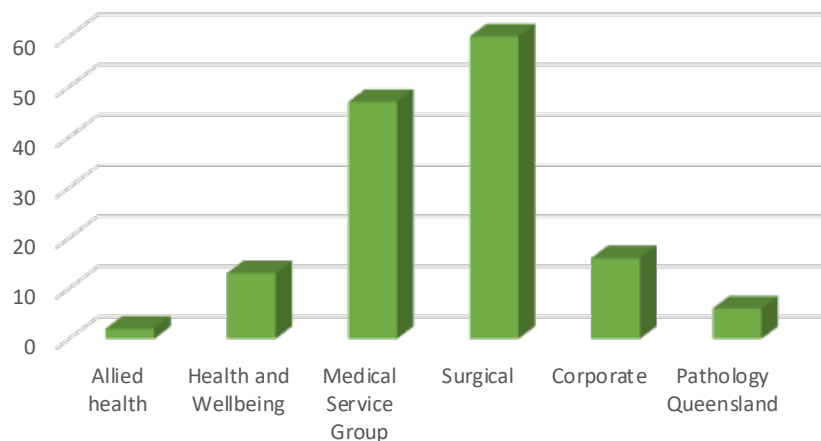
Townsville Hospital and Health Service Oncologist Professor Sabe Sabesan, the architect of the model, said the model had been assessed by the ARC as having a “high impact” to the community and society. “This project scored 92 out of 100 by the council which puts the project in the very top-tier in the nation for projects that are making a profound difference to the community,” he said. “This is important because the aim of research investment is to improve health outcomes for our communities.”

An agreement signed between Townsville, Cairns, Mackay and North-West Hospital and Health Services will see telehealth drug trials delivered as the ‘Northern Teletrial Cluster’. This Townsville model has received significant media coverage including on Radio National Breakfast with Fran Kelly and the Health Report by Norman Swan.

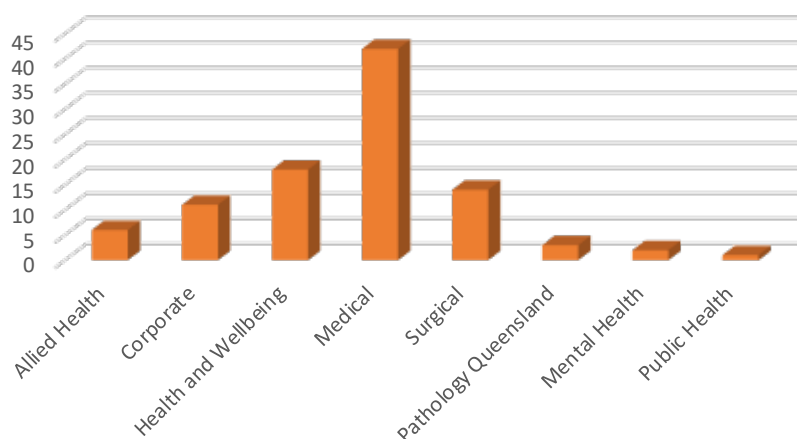
Research Activity



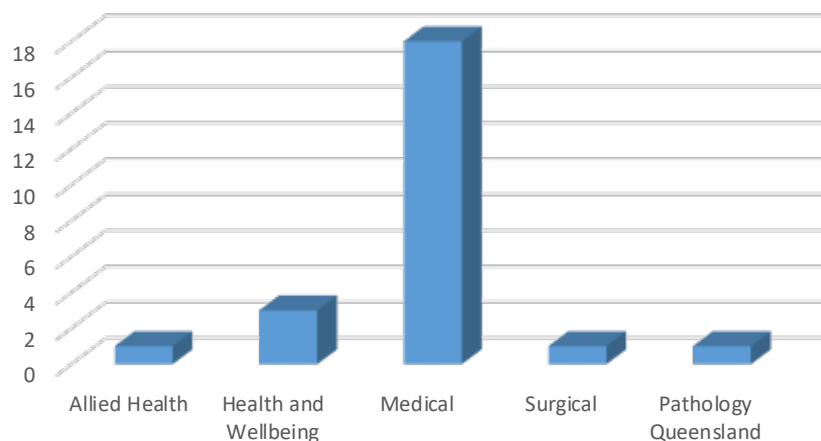
Publications



RGO Authorised Studies



Externally Funded Studies



**The number of research applications submitted for research governance authorisation was severely affected by the Townsville floods in early 2019.*



Townsville Health Library

The Library team works closely with TRESA and Ethics staff to support researchers in all aspects of research. The librarians are familiar with the research application process through being members of the Ethics Committee.

The librarians assist novice and experienced researchers to gather the information required to define and refine their research topic. Search strategies are developed collaboratively for a range of databases and other resources.

Search results are downloaded into EndNote reference manager which provides automatic in-text referencing and bibliographies.

Other services include an expert and swift document supply service (including hard-to-find items) and advice on Journal Impact Factors and selecting the best publication outlet. Services are available at The Townsville hospital and off-site: search online for Townsville Health Library.





New roles and projects mark exciting time for research

Key researchers at The Townsville Hospital kicked off the first quarter of 2019 with a variety of exciting new research projects and roles in play. The director of emergency medicine research role was taken on by Dr Tanya Mellett, who said she was excited to step into the position. "This will be my first formal research role and I bring with me a background in clinical education, audit work and clinical experience as an emergency physician here at The Townsville Hospital's emergency department," Tanya said. "The role ensures oversight of the many current research trials occurring in this department and, as we know, junior doctor education is essential for recruiting patients into trials so we can have the best outcomes possible." Tanya said the role, which was previously held by Dr Vinay Gangathimmaiah, was integral in keeping Townsville at the forefront of leading research. "The Townsville Hospital has a long history of taking part in multi-centre research and I look forward to carrying that tradition on," Tanya said. "To ensure that North Queensland is represented in research outcomes, we partner with hospitals such as the Queensland Children's Hospital in Brisbane and Royal Children's Hospital in Melbourne."

Also stepping into new boots was clinical research coordinator Helena McInnes who hit the ground running with brand-new trials in the paediatric emergency department. "Currently, there are six multi-centre research trials all relating to critically unwell children presenting to our emergency

department, and of those, the one started while I've been in the role is PARIS 2 which looks at children who need more effective breathing support when it comes to respiratory compromise," Helena said. "My role with PARIS 2 is to educate nurses and doctors, which is important because multi-disciplinary education is what allows research to go ahead well; otherwise, you have too many breaks of information in the chain. "The success of any research relies on not only the paperwork and governance but also teams like BEES who supply equipment required, administration staff who chart and collect information, pathology for sampling tests, pharmacy for their medications and many more. "It may take a village to raise a child, but it takes departments and teams to make research valid."

As the new research members gain more speed in their new roles, one aspect has stayed the same - research nurse Leonie Jones who has been involved with clinical trials at the hospital since 1997. "We've had a great team over the years and I'm excited to see it continue with these new arrivals and trials," Leonie said. "I'm mostly involved in paediatric trials like the RAPIDS trial, which looks at sepsis in acutely ill children, the Fibrinogen Early in Severe Trauma Study (FEISTY Junior) trial and a few retrospective trials on asthma, quad-bike injuries and motor vehicle crashes. "It's been really good to have Tanya come on board with research as I feel like she's got a great background and can provide new eyes. "I'm excited to see where Helena takes her trials; it feels like an exciting new period and I'm excited to see our growth continue."



Allied Health Services Division

Message from the Director of Allied Health Services

The Allied Health Service Division (AHSD) has continued to enhance research capacity and capability throughout 2019.

Highlights include one enrolment in a higher degree by research, 5 peer reviewed publications across the disciplines supported by the HP Research Fellow, approximately \$100,000 in grant funding, and 8 presentations at state, national or international conferences.

Our discipline departments have been actively involved in research.

Psychology has progressed a randomised controlled trial investigating treatment efficacy of cognitive behaviour therapy for people presenting with non-cardiac chest pain, and Social Work has participated in a collaborative research project examining Domestic and Family Violence screening practices of emergency clinicians in Queensland.

Physiotherapy has continued to participate actively in research through data collection for numerous state-wide collaborations and have commenced a multi-site project evaluating a new model of care to improve health service responsiveness to domestic and family violence in addition to a collaboration with QCH for the Development and Evaluation of a Paediatric Primary Contact Physiotherapy Continence Service.

Occupational Therapy has received a SERTA grant to validate a prioritisation tool for use on acute hospital wards and are currently finalising a qualitative study of the expanded scope paediatric burns model of care which will be submitted for publication in a peer reviewed journal.

Speech Pathology are involved in two collaborative multisite research projects regarding cancer care and aphasia. These research activities have continued into 2020 and offer exciting opportunities to integrate research and clinical practice in our teams.

Joanne Stitt
Director, Allied Health Services

Allied Health Services Division

Key Researchers



Mark Gooding

Assistant Director of Physiotherapy

In 2019 Mark continued to focus on multi-centre research investigating the clinical activity profile of physiotherapy students during clinical placements and the changes in direct patient care activity from physiotherapy student to new graduate.

This research the perceptions of physiotherapists regarding the physiotherapy student contribution to the delivery of health services and the perceptions of physiotherapists regarding the transition from student to new graduate and their preparedness for practice.

Research Team:

Principal / Coordinating Investigator
Susan Stoikov

Principal Investigators

Mark Gooding
Kassie Shardlow
Suzanne Kuys
Jane Butler
Linda Maxwell

Research Collaborations:

Australian Catholic University
Metro South HHS

Research Presentations at Conferences:

Behind the stats – what do clinical educators do? (Oral presentation), National Allied Health Conference, 5-8 August 2019, Brisbane

Preparing students for the transition to new graduate therapist: how are we doing? (Poster Presentation), National Allied Health Conference, 5-8 August 2019, Brisbane

Allied Health student clinical placements: is the placement mix right? (Oral presentation), National Allied Health Conference, 5-8 August 2019, Brisbane

Behind the stats - what do students and clinical educators do? (Poster presentation), Townsville Health Research Showcase, 28-30 October 2019, Townsville

Publications

1. Fradgley EA, Karnon J, Roach D, Harding K, Wilkinson-Meyers L, Chojenta C, Pain, T. et al. Taking the pulse of the health services research community: A cross-sectional survey of research impact, barriers and support. *Australian Health Review*. 2019.
2. Beric E, Smith R, Phillips K, Patterson C, Pain T. Swallowing disorders in an older fractured hip population. *Australian Journal of Rural Health*. 2019;27:304-310.

Allied Health Services Division

Research Publications

1. Fradgley EA, Karnon J, Roach D, Harding K, Wilkinson-Meyers L, Chojenta C, Pain, T. et al. Taking the pulse of the health services research community: A cross-sectional survey of research impact, barriers and support. Australian Health Review. 2019.
2. Beric E, Smith R, Phillips K, Patterson C, Pain T. Swallowing disorders in an older fractured hip population. Australian Journal of Rural Health. 2019;27:304-310.

Allied Health Services Division

RGO Approved Research

Principal Investigators	Department	Study Title	Funding Source
Ms Vidula Garde	Department of Psychology	Psychological interventions for reducing ED representations a randomised controlled trial	SERTA
Ms Amanda Corneal	Nutrition and Dietetics	An observational cross-sectional study exploring the provision of mid-meals to adult inpatients' receiving a Self-Select mid-meal service	
Mrs Laura Cooper	Physiotherapy	Models of care for airway clearance services in Australia for adults with chronic lung conditions: a descriptive survey.	
Ms Kerrie-Anne Frakes	Sub Acute Care Unit	Evaluation of Transition2sub-acute: an allied health sub-acute collaborative project	
Dr Kristine Shrubsole	Speech Pathology	Sustaining acute speech pathologists' implementation of recommended aphasia practices: Follow-up of a cluster RCT.	
Miss Frances Cochrane	Speech Pathology	How do Indigenous Liaison Officers support speech pathology services for Indigenous Australian adults with acquired neurogenic communication disorders?	Speech Pathology Australia



Health & Wellbeing Service Group

Message from the Health & Wellbeing Service Group Director

2019 was a year of success for novice and experienced researchers working in Health and Wellbeing Service Group. Most encouragingly Study Education Research Trust Account Grants were allocated to projects by novice researchers in areas aligning with National and Statewide Councils and Clinical Networks. Research projects are focused on improving the quality of maternity services and to support consumers to actively participate in decision making to improve their experience and health outcomes.

The launch of the integrated electronic medical record (ieMR) in 2016 has seen many changes for health practitioners and the way staff and clients interact in health settings. Staff are particularly excited to understand the advantages and disadvantages of the ieMR technology and the impacts of Immersive Sensory Experience in labour on maternal behaviour in labour and the mode of birth.

Research in neonatal care continues with the Minister for Health bestowing the Queensland Health Award for Excellence for Pursuing Innovation and Ministers Overall Award for Outstanding Achievement to the Neonatal Intensive Care Unit Babycams. This extraordinary study, in partnership with CSIRO, James Cook University and Optus Communications, connected families to their critically unwell babies via a live stream video via cot-based webcams. This study positively improved the experience of families by reducing stress and anxieties regardless of whether they lived nearby or in the remotest part of northern Queensland.

In addition to supporting this project a neonatologist was awarded a \$1.55 million-dollar grant to explore the impact of a mother's health on her baby's kidney growth and function. Although the focus was for Aboriginal and Torres Strait Islander families, non-Indigenous families will also be included in the study during this four-year study.

Despite a very challenging start to 2019, following the Monsoonal Flood, clinicians continued to publish in peer reviewed journals across areas covering paediatric diabetes, pregnancy outcomes in women with rheumatic heart disease, impact of imminent birth education in rural and remote settings and the use of graduated colour tape measure in neonatal skin injuries.

Vicki Carson
Health & Wellbeing Service Group Director





Million-dollar grant awarded to Townsville Hospital NICU doctor

One of the largest individual grants from Australia's peak body for medical research has been awarded to a Townsville Hospital neonatologist to investigate how a mother's health impacts on her baby's kidney development. Dr Yoga Kandasamy has been awarded \$1.55 million by the National Health and Medical Research Council (NHMRC) to investigate linkages between a mother's health and her baby's renal growth and function.

"The focus of the project is Aboriginal and Torres Strait Islander families, but the study is open to everybody," Dr Kandasamy said. "I am hoping to recruit around 400 mothers and babies – equal numbers Indigenous and non-Indigenous.

Anne Akee from Thursday Island who is awaiting the birth of her fifth baby is already signed up for the trial. "It's important for my children and to make sure they are well developed," Mrs Akee said. "Anne very kindly signed up her twin boys, now three, to my first research project which studied kidney development in preterm babies and I'm so pleased she has come aboard again with us," Dr Kandasamy said. The babies in the study will be followed up for two years to see if there were any early signs of kidney injury. "In addition to helping inform the research findings, we know that early intervention can improve or delay worsening of kidney function."

Dr Kandasamy said his four-year project would focus on kidneys because of the high local

incidence of renal disease, particularly in the Indigenous population. "Around 30 per cent of the 900 babies admitted to our neonatal unit each year are Aboriginal or Torres Strait Islander," he said. "That statistic alone got me thinking about why the incidence of renal disease was so much higher. Was it genetic or was it something we could do something about?"

Adjunct Professor of James Cook University's Indigenous Education and Research Centre and research coordinator at the Apunipima Cape York Health Council Yvonne Cadet-James said the research was important to achieve a better understanding of the links between a mother's health and the impact this has on her baby throughout its life. "The focus on Aboriginal and Torres Strait Islander people will make a considerable contribution to improving outcomes for those suffering from renal disease which severely impacts on the physical, social and emotional health and wellbeing of families and communities," she said. Board Chair Tony Mooney said it was wonderful to see local clinicians like Dr Kandasamy attracting research funding of the magnitude of the NHMRC grant. "Our future is about continuing to grow and cement our reputation as a leader in research and education for regional Australia," he said. Dr Kandasamy will collaborate with the University of Newcastle and James Cook University on the project which is open to pregnant women who are booked in to birth at The Townsville Hospital.

Health & Wellbeing Service Group

Key Researchers

Perinatal Neonatal Research Group

Research Team:

CI / Advisor (BabyCam, FerP, Microbiome)
Dr Y Kandasamy

CI (BabyCam)
Ms Michelle Evans
Ms Michelle Baxter
Dr Meegan Kilcullen (JCU)

CI / Advisor (FerP, Microbiome)
Dr D Watson

CI / Student (FerP)
Ms Sonja Brennan

CI (Microbiome)
Dr Donna Rudd (JCU)

CI / Student (Microbiome)
Mr Jakob Westerway (JCU)

Key Achievements:

- Queensland Advancing Clinical Research Fellowships (Ms Sonja Brennan)
- FERP study Best Oral Presentation (Ms Sonja Brennan) JCU/THHS Research week presentation
- Neonatal Fecal Microbiome study (Most promising presentation award, Mr Jakob Westerway) JCU/THHS Research week presentation
- Baby Cam Project – Q Health Award for Excellence – Winner in Pursuing Innovation Category and the Minister's Overall Award for Outstanding Achievement
- Baby Cam Project – Best Oral Presentation THHS Research week

Health & Wellbeing Service Group

Research Publications

1. August D, Hitchcock I, Tangney J, Ray RA, Kandasamy Y, New K. Graduated colour tape measure: Development and demonstration of this tool in a case series of neonatal skin injuries. *Journal of Tissue Viability*. 2019.
2. Beswick R, David M, Higashi H, Thomas D, Nourse C, Koh G, et al. Integration of congenital cytomegalovirus screening within a newborn hearing screening programme.0(0).
3. Connell J, Kelly J, Nagle C. Imminent birth education for rural and remote settings: An evaluation study. *Australian Journal of Rural Health*. 2019
4. Groom KM, Watson D. STRIDER NZAus: a multicentre randomised controlled trial of sildenafil therapy in early-onset fetal growth restriction. *BJOG: An International Journal of Obstetrics and Gynaecology*. 2019.
5. Ireland S, Ray RA, Larkins S, Woodward L. Perspectives of time: A qualitative study of the experiences of parents of critically ill newborns in the neonatal nursery in North Queensland interviewed several years after the admission. *BMJ Open*. 2019;9(5).
6. Kandasamy Y, Rudd D, Smith R, Hartley L, De Boever P. Retinal microvascular development in the first two years. *Microvascular Research*. 2019;125.
7. Lander K, Danda N, Watson D, Vangaveti V, Yadav R. Pregnancy Outcomes in Indigenous Women With RHD At Townsville Hospital. *Heart, Lung & Circulation*. 2019;28:S60-S.
8. Li J, McInnes, H, Kandasamy, Y. The impact of prematurity on postnatal growth of different renal compartments. *Nephrology (Carlton, Vic)*.
9. Little J, Nugent R, Vangaveti V. Influence of maternal obesity on Bishop Score and failed induction of labour: A retrospective cohort study in a regional tertiary centre. *Australian & New Zealand Journal of Obstetrics & Gynaecology*. 2019;59(2):243-50.
10. Rikard-Bell J, Iyer J, Rane A. Perineal outcome following educational intervention: a retrospective audit of primiparous women. *Journal of Obstetrics & Gynaecology*. 2019;39(1):36-40.
11. Tanaka K, Coghill E, Ballard E, Sekar R, Amoako A, Khalil A, et al. Management of caesarean scar pregnancy with high dose intravenous methotrexate infusion therapy: 10-year experience at a single tertiary centre. *European Journal of Obstetrics and Gynecology and Reproductive Biology*. 2019;237:28-32.
12. Thompson BE, Newsom D, White A. Paediatric electroencephalograph: The benefits of guidelines. *Journal of Paediatrics & Child Health*. 2019;55(4):393-8.
13. Wales J, Yates J. Peer review of rural and tertiary Queensland paediatric diabetes services: A pilot project from the National Health Service. *Journal of Paediatrics and Child Health*. 2019.

Health & Wellbeing Service Group

RGO Approved Research

Principal Investigators	Department	Study Title	Funding Source
CPI - A/Prof Linda Selvey	Townsville Sexual Health Service	Gonorrhoea in women: Sexual behavior and practices that may affect the risk of infection	
Lua Saylany	Paediatrics	Risk Factors, Morbidity and Mortality Associated with Airway Foreign Body Inhalation (AFBI) in Children: A Queensland Experience	
Dr Margot Bosanquet	Paediatrics	VISIBLE: Vision Intervention for Seeing Impaired Babies: Learning through Enrichment	
Dr Arun Menon	Sexual Health Service	Gonorrhoea Resistance Assessment by Nucleic Acid Detection: A Program Evaluation Acronym: GRAND II Study	University of Qld
Ms Jessica Valdeter	Paediatrics	BURNS REGISTRY AUSTRALIA AND NEW ZEALAND (Townsville Paediatric Burns Service) Acronym: BRANZ TPBS	
Dr Rachael Nugent	Obstetrics & Gynaecology	Wondering What Women Want	
Dr Susan Ireland	Neonatology	Neonatal Alloimmune Thrombocytopenia (NAIT) Registry (NMA)	
Ms Cathy Henry	Paediatric Oncology	Parental Perceptions of a Shared Care Model for Paediatric Oncology care in Queensland Australia	
Ms Sari Holland	Midwifery/Birth Suite Nursing & Midwifery Research	An immersive sensory experience during childbirth: A proof of concept study	SERTA
Ms Amanda Ostrenski	Midwifery / Maternity / Professional Nursing & Midwifery Service	Best practice in the use of an integrated electronic health record in maternity care environments	SERTA

Principal Investigators	Department	Study Title	Funding Source
Ms Angela Cooper	Sexual Health Service ATODS (Needle & Syringe Program)	Enhancing Treatment of Hepatitis C in Opioid Substitution Setting (ETHOS II): A partnership project to enhance hepatitis C drug care in drug clinics. Acronym: ETHOS ENGAGE	
Dr Yogavijayan Kandasamay	Neonatology / Obstetrics & Gynaecology	The Relationship between Maternal Health and Infant Renal Development and Function	NHMRC
Dr Yogavijayan Kandasamay	Neonatology	Is maternal fever in the perinatal period a reliable predictor of neonatal sepsis?	
Dr Arun Menon	Sexual Health	ACCESS: Australian Collaboration for Coordinated Enhanced Sentinel Surveillance	Aust. Dept of Health & Ageing
A/Prof Sally Bennett	Townsville Community Health Service: Occupational Therapy	Implementing the Tailored Activity Program for people with dementia or memory loss living at home, and their family or informal carers: (i-TAP Australia): Phase 2	
Ms Tayla Storr	Nutrition/Dietetics	The NOURISH point prevalence study: Nutritional Outcomes of patients Undergoing Resection for upper gastroIntestinal cancer in AuStralian Hospitals.	
Dr Nimisha Aithal	Neonatology	The Association Between Cord Clamping, Red Cell Indices and Hyperbilirubinemia in Term Neonates Requiring Phototherapy Short Title: Cord Clamping and Jaundice in Babies	
Dr Margot Bosanquet	Paediatrics	Early detection of infants at risk or with cerebral palsy: QLD clinical network	



Medical Service Group

Message from the Medical Service Group Director

2019 was another outstanding year for the Medical Service Group in terms of the number of research projects and submitted research papers.

The Service Group is fortunate in that we have enthusiastic individuals and teams, who are passionate within their field, and want to provide the best for our patients.

The Medical Service Group recognises the importance of research not only for discovering new treatments and making sure that we use existing treatments in the best possible ways, but also in changing the way that

healthcare professionals work and how our services are delivered.

As a teaching and university hospital, the Service Group will continue to support and encourage research, continually strive for improvement and be the leader in research driven healthcare delivery for years to come.

John Swiatczak
Medical Service Group Director



Research shows telehealth more effective than face-to-face

THHS Resident medical officer Dr Nisha Nangrani presented ground-breaking research to an international conference about how North Queensland is leading the way in improving the health outcomes for rural patients with diabetes. Dr Nangrani presented the findings of her research at the American Diabetes Association's 79th Scientific Sessions conference in San Francisco, an international event held over four days attracting 15,000 delegates from 150 countries.

Dr Nangrani's research showed a dramatic improvement in the health outcomes of diabetic patients in rural North Queensland since the introduction of telehealth. The study looked primarily at a patient's HbA1c, a measure of how well a diabetic patient's sugar levels or glycaemia was being controlled. A non-diabetic patient would have a HbA1c reading at around seven per cent while a reading of above 10 per cent was considered clinically alarming. "What we found was that patients who were accessing this care via telehealth had significantly better control over their blood sugar than when they had to previously travel for treatment," Dr Nangrani said. "The results showed a statistically significant reduction in HbA1c from 9.1 per cent to 8.1 per cent across the 330 patients included in the study. This means that there has been measurable improvement in the management of their diabetes because of accessing care through telehealth."

Dr Nangrani said Australia was at the forefront of telehealth service delivery worldwide and the interest in the support for telehealth on the global stage was extremely high. "What my research found was that providing this care by telehealth has proved to be more effective in the management of diabetes than face-to-face consultations," she said. "The research has also demonstrated that this care has been able to be delivered without compromising the required levels of clinical standards. "In Australia we are extremely lucky to have a well-incentivised telehealth network and we really are leading the world in delivering improved outcomes for our patients by using this technology."

Endocrinologist staff specialist Professor Usman Malabu said Dr Nangrani's research showcased North Queensland as an international leader in diabetes management. "We established our telehealth endocrinology network across North Queensland and thanks to this research we now have tangible proof of its benefits," he said. "The benefits of telehealth in terms of the convenience for the patient and the savings of travel costs are well documented but now we have proof that it is actually delivering better health outcomes as well. I hope that other specialties and hospitals consider the role that telehealth can play in delivering care to their patients."



8,000
telehealth appointments
a year



80
different medical,
surgical, allied health
and nursing specialties
use telehealth



150
dedicated video-
conferencing machines
at Townsville University
Hospital



Patients requiring
chemotherapy, audiology
testing and burns and
wound management may
be eligible for telehealth
appointments



Townsville first in
Australia to deliver drug
trials for cancer patients
through telehealth

Medical Service Group

Key Researchers

Dr Denise F Blake

Senior Staff Specialist, Emergency and Hyperbaric Medicine

Research Team:

PhD Supervisors

Dr Melissa Crowe

Prof Simon J Mitchell

A/Prof Neal W Pollock

Statistician

Dr Daniel Lindsay

Research Nurse

Annie Brouff

Research Grants:

Grant Funding Body Name: Australian Diving Safety Foundation

Grant Application Title: Queensland retrieval of divers: a retrospective review

Grant Amount: \$20, 398.00

Research Presentations at Conferences:

Comparison of tissue oxygenation achieved breathing oxygen using different delivery devices and flow rates, My Research Rules. JCU, October 2019, Townsville

Winner-Early candidature student, \$2,500.00, My Research Rules. JCU, October 2019, Townsville

Publications

1. Blake DF, Pollock NW, Evaluating oxygen delivery with a demand valve. Alert Diver. 2019;4:110-111
2. Blake DF, Pollock NW, Evaluation de l'apport en oxygène avec la valve à la demande. En Profondeur. 2019;18(2):54-5.

Medical Service Group

Research Publications

1. Van der Walt M., Crabtree T., Albantow C., PLA as a suitable 3D printing thermoplastic for use in external beam radiotherapy. *Australasian Physical & Engineering Sciences in Medicine* Dec 2019
2. Sabesan, S., Brown, A., Poxton, M., Rainey, N., Ansari, Z., Richmond, S., Waye, R. Implementation of a Teletrial model in the Northern Cluster (North Queensland, Australia): A Case Study. *Asia-Pacific Journal of Clinical Oncology* Nov 2019.
3. Poxton, M., Gebbie, C., Jenkins-Marsh, S., Lusa, R., Johnson, T., Garbutt, A., Sabesan, S., et al. Steps for setting up a teletrial cluster. *Asia-Pacific Journal of Clinical Oncology* Nov 2019.
4. Sabe Sabesan et al, An Introduction to the Australasian Teletrial Model. *Asia-Pacific Journal of Clinical Oncology* Nov 2019.
5. Hamilton, E., Van Veldhuizen, E., Brown A., Brennan, S., Sabesan, S. Telehealth in radiation oncology at the Townsville Cancer Centre: Service evaluation and patient satisfaction. *Clinical and Translational Radiation Oncology* 15 (2019) 20–25
6. Wong J, Santoso Y, Lan EL. Readmissions in the elderly – The geriatric revolving door. *Internal Medicine Journal*. 2019;49(S3):34-.
7. Wong J, New R, Chan K. Geriatric evaluation and management criteria formulation – an analysis of outcomes in the rehabilitation wards in a regional Australian hospital...RACP Congress 2019 Impacting Health Along the Life Course 6-8 May 2019 Aotea Centre, Auckland, New Zealand. *Internal Medicine Journal*. 2019;49:34-.
8. Wong J, New R, Chan K. Diabetes and dementia in the geriatric population – The icing on the cake. *Internal Medicine Journal*. 2019;49:13-.
9. Ahn T, Roberts MJ, Abduljabar A, Joshi A, Perera M, Rhee H, et al. A Review of Prostate-Specific Membrane Antigen (PSMA) Positron Emission Tomography (PET) in Renal Cell Carcinoma (RCC). *Molecular Imaging and Biology*. 2019.
10. Babl FE, Oakley E, Dalziel SR, Borland ML, Phillips N, Kochar A, et al. Accuracy of NEXUS II head injury decision rule in children: a prospective PREDICT cohort study. *Emergency Medicine Journal*. 2019;36(1):4-11.
11. Babl FE, Pfeiffer H, Dalziel SR, Oakley E, Anderson V, Borland ML, et al. Paediatric intentional head injuries in the emergency department: A multicentre prospective cohort study. *Emergency Medicine Australasia*. 2019.
12. Bernardes CM, Beesley V, Martin J, Sabesan S, Baade P, Meiklejohn JA, et al. Unmet supportive care needs among people with cancer: A cross-cultural comparison between Indigenous and Non-Indigenous Australians. *European Journal of Cancer Care*. 2019.
13. Borland ML, Dalziel SR, Phillips N, Lyttle MD, Bressan S, Oakley E, Furyk, J et al. Delayed Presentations to Emergency Departments of Children With Head Injury: A PREDICT Study. *Annals of Emergency Medicine*. 2019.
14. Dalziel K, Cheek JA, Fanning L, Borland ML, Phillips N, Kochar A, Furyk, J et al. A Cost-Effectiveness Analysis Comparing Clinical Decision Rules PECARN, CATCH, and CHALICE With Usual Care for the Management of Pediatric Head Injury. *Annals of Emergency Medicine*. 2019;73(5):429-39.
15. Dalziel SR, Borland ML, Furyk J, Bonisch M, Neutze J, Donath S, et al. Levetiracetam versus phenytoin for second-line treatment of convulsive status epilepticus in children (ConSEPT): an open-label, multicentre, randomised controlled trial. *Lancet*. 2019;393(10186):2135-45.
16. Deen J, Schaidler H. The use of cinacalcet for the treatment of calciphylaxis in patients with chronic kidney disease: A comprehensive review. *Australasian Journal of Dermatology*. 2019.
17. du Toit M, Malau-Aduli B, Vangaveti V, Sabesan S, Ray RA. Use of telehealth in the management of non-critical emergencies in rural or remote emergency departments: A systematic review. *Journal of Telemedicine & Telecare*. 2019;25(1):3-16.
18. Economides A, Schaidler H. Australasian College of Dermatologists Abstracts Presented at the 52nd Annual Scientific Meeting 18–21 May 2019 Melbourne Convention and Exhibition Centre Melbourne, Victoria. *Australasian Journal of Dermatology*. 2019;60(S1):14-106.
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20. Fernando ME, Crowther RG, Lazzarini PA, Sangla KS, Wearing S, Buttner P, Golledge J. et al. Within- and Between-Body-Site Agreement of Skin Autofluorescence Measurements in People With and Without Diabetes-Related Foot Disease. *Journal of diabetes science and technology*. 2019;13(5):836-46.
21. De Florian B. Rural terms should be mandatory for ACEM trainees: Yes. *Emergency Medicine Australasia*. 2019;31(3):463-4.

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23. Furyk J, Banks C. From Other Journals. *Emergency Medicine Australasia*. 2019;31(2):293-5.
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26. Khan SA, Chandran S, Chin J, Karim S, Mangira D, Ermerak G, Welch, C, Zad, M. et al. Tu1368 Endoscopic ultrasonography-guided drainage of pancreatic fluid collections using a novel lumen-apposing metal stent: a multi-center Australian, New Zealand and Asian experience. *Gastrointestinal Endoscopy*. 2019;89(6):AB592-AB3.
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31. Nath K, Ganeshalingam V, Ewart B, Heyer E, Watt K, Birchley A, Casey, J, Lai, HC, Morris, E, Hodges G, et al. A retrospective analysis of the prevalence and clinical outcomes of vitamin D deficiency in myeloma patients in tropical Australia. *Supportive Care in Cancer*. 2019.
32. Pandit T, Ray R, Sabesan S. Review article: Managing medical emergencies in rural Australia: A systematic review of the training needs. *Emergency Medicine Australasia*. 2019;31(1):20-8.
33. Perks SJ, Lanskey C, Robinson N, Pain T, Franklin R. Systematic review of stability data pertaining to selected antibiotics used for extended infusions in outpatient parenteral antimicrobial therapy (OPAT) at standard room temperature and in warmer climates. *European Journal of Hospital Pharmacy*. 2019;ejhpharm-2019-001875.
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Medical Service Group

RGO Approved Research

Principal Investigators	Department	Study Title	Funding Source
Dr Georgina Hodges	Townsville Cancer Centre	An international, multicentre non-interventional, retrospective study to describe treatment pathways, outcomes and resource use in patients with classical hodgkin lymphoma Acronym: B-HOLISTIC	
Dr Kylie Lopes Floro	Radiation Oncology / Townsville Pathology Lab	The role of cigarette smoke on oral-pharyngeal cancer stem cells	RANZCR / SERTA
Dr Abhishek Joshi	Townsville Cancer Centre - medical oncology	A Phase 3 Randomized, Double-Blind, Controlled Study Evaluating FPA144 and Modified FOLFOX6 in Patients with Previously Untreated Advanced Gastric and Gastroesophageal Cancer: Phase 3 Preceded by Dose-Finding in Phase 1 Acronym: FIGHT	ICON Clinical Research Pty Ltd
Dr Christopher Heather	Infectious Diseases and Microbiology	Real-time nanopore diagnostics for rapid sepsis response	SERTA
Dr Jim Wong	Gerontology	Geriatric Evaluation and Management Criteria Formulation – An analysis of outcomes in the rehabilitation wards of a tertiary hospital in regional Australia	
Dr Suresh Varma	Townsville Cancer Centre	A randomised open-label phase II trial of consolidation with nivolumab and ipilimumab in limited-stage SCLC after chemo-radiotherapy. STIMULI: Small cell lung carcinoma Trial with nivolumab and IpiliMUMab in Limited disease. Acronym: STIMULI	University of Sydney
n/a - Teletrial PI at lead site (ie PAH) is Prof Kenneth O'Byrne	Medical Oncology	BO40336: A Phase III, Open-label, Randomized study to evaluate the efficacy and safety of adjuvant alectinib versus adjuvant platinum-based chemotherapy in patients with completely resected Stage IB (Tumors ≥ 4 CM) to stage IIIA anaplastic lymphoma kinase-positive non-small cell lung cancer Acronym: ALINA	Roche Products Pty Ltd

Principal Investigators	Department	Study Title	Funding Source
Dr Marcus Hu	Radiation Oncology	Metastatic cutaneous squamous cell: radiation treatment and outcomes	
Dr Anna Kim	Radiation Oncology	The role of FDG PET/CT for staging nodal metastases in cutaneous squamous cell carcinoma	
Dr Suresh Varma	Medical Oncology	Phase II study of Intravenous Vinorelbine in Patients with Relapsed Platinum Resistant or Refractory C5 High Grade Serous, Endometrioid, or Undifferentiated Primary Peritoneum, Fallopian Tube or Ovarian Cancer (VIP) Acronym: Oasis VIP	ANZGOG
Mr Martin Keene	Oncology	Complementary and Alternative Medicine Use in Cancer	
Miss Aakanksha Desai	Diabetes and Endocrinology	Outcomes of Patients Following Following Pituitary Adenoma Resection: a Retrospective Comparison of Queensland Sites	
Dr Denise Blake	Hyperbaric Medicine	Queensland retrieval of divers: a retrospective review	ADSF
Dr Divita Jhaveri	Rheumatology	Experiences of Queensland rheumatologists with telemedicine	
Dr Stephanie Hendry	Microbiology	Nocardiosis in Queensland: Epidemiology, Microbiology, Treatment and Outcomes	
Dr Suresh Varma	Medical Oncology	A Multicenter, Double Blind, Randomized, Controlled Study of M7824 with Concurrent Chemoradiation Followed by M7824 versus Concurrent Chemoradiation Plus Placebo Followed by Durvalumab in Participants with Unresectable Stage III Non-small Cell Lung Cancer Short Title: M7824 with cCRT in Unresectable Stage III NSCLC	IQVIA RDS Pty Ltd
Dr Abhishek Joshi	Medical Oncology	First real-world data on unresectable stage III NSCLC patients treated with durvalumab after chemoradiotherapy Short Title: PACIFIC-Real World (PACIFIC-R)	IQVIA RDS Pty Ltd
Dr Stephen Dick	Palliative Care	Use of a Standardised Dyspnoea Action Plan in Palliative Care	

Principal Investigators	Department	Study Title	Funding Source
Dr Suresh Varma	Medical Oncology	BGB-A317-306: A Randomized, Placebo-Controlled, Double-Blind Phase 3 Study to Evaluate the Efficacy and Safety of Tislelizumab (BGB-A317) in Combination with Chemotherapy as First-Line Treatment in Patients with Unresectable, Locally Advanced Recurrent or Metastatic Esophageal Squamous Cell Carcinoma	Beigene Aust. Pty Ltd.
Dr Abhishek Joshi	Medical Oncology	Denosumab and Pembrolizumab in clear cell renal carcinoma: a phase II trial (ANZUP1601) Short Title KEYPAD	ANZUP Cancer Trials Group Ltd
Dr Megan Lyle Teletrials - THHS Sub Investigator: Dr Zulfiqer Otty	Medical Oncology	COMBI-APlus: Open-label, phase IIIb study of dabrafenib in COMBination with trametinib in the Adjuvant treatment of stage III BRAF V600 mutation-positive melanoma after complete resection to evaluate the impact on pyrexia related outcomes of an adapted pyrexia AE-management algorithm (Plus)	Novartis Pharmaceuticals Aust. Pty Ltd.
Dr Abhishek Joshi	Medical Oncology	A Phase 3 Study of Pembrolizumab in Combination with Pemetrexed/Platinum (Carboplatin or Cisplatin) Followed by Pembrolizumab and Maintenance Olaparib vs Maintenance Pemetrexed in the First-Line Treatment of Participants with Metastatic Nonsquamous Non-Small-Cell Lung Cancer– MK7339-006	Merck Sharpe & Dohme (Aust) Pty Ltd
Dr Naveen Manchal	General Medicine	A retrospective observational study on hospital acquired respiratory viral infections.	
Mrs Amy Brown	Radiation Oncology	Preferences for Prostate Image Guidance	SERTA
Dr John Casey	Haematology, Pathology	Australian and New Zealand Massive Transfusion Registry (ANZ-MTR)	
Bronwyn Shirley	Radiation Oncology	The Utility of Regular Magnetic Resonance Imaging in Radiation Therapy	
Dr Abhishek Joshi	Medical Oncology	A Phase 3 Study of Pembrolizumab in Combination with Carboplatin/Taxane (Paclitaxel or Nab-paclitaxel) Followed by Pembrolizumab with or without Maintenance Olaparib in the First-line Treatment of Metastatic Squamous Non-small Cell Lung Cancer (NSCLC) Acronym: MK7339-008	Merck Sharpe & Dohme (Aust) Pty Ltd

Principal Investigators	Department	Study Title	Funding Source
Dr John Casey	Haematology	Phase II Study of Blinatumomab as Induction Therapy in Adolescent and Young Adult Acute Lymphoblastic Leukemia Acronym: Sublime	ALLG
Prof Sabe Sabesan	Medical/Radiation Oncology	Collaboration and Communication in Cancer Care for Aboriginal and Torres Strait Islander people: The 4C's Project improving patient-centred care and treatment outcomes	
Ms Glynnis James	Palliative Care	Divergence between palliative patients preferred place of death and their actual place of death	
Ms Bronwyn Shirley	Radiation Oncology	Analysis of the impact of radiologist training on accuracy of pelvic contouring Short Title: AIRTRAP	SERTA
Dr Suresh Varma	Medical Oncology	A Phase III Open-Label, Multi-Centre, Randomised Study Comparing NUC-1031 plus Cisplatin to Gemcitabine plus Cisplatin in Patients with Previously Untreated Locally Advanced or Metastatic Biliary Tract Cancer Short Title: Nutide 121	IQVIA RDS Pty Ltd
Dr Andrew Birchley	Haematology	Real World Treatment Patterns and Clinical Outcomes in Unfit AML Patients receiving First Line Systemic Treatment or Best Supportive care (CURRENT)	Abbie Pty Ltd
Dr Stephen Dick	Palliative Care	Prevalence of Polypharmacy and Potentially Inappropriate Medications in a population of patients referred to a palliative care service.	
Dr Georgina Hodges	Haematology	The International AML Platform Consortium (IAPC) Trial Short Title: ALLG AML M22	ALLG
Prof Damon Eisen	Infectious Diseases	A Phase 3, randomized, doubleblind, active controlled study to compare the efficacy and safety of ridinilazole (200 mg, bid) for 10 days with vancomycin (125 mg, qid) for 10 days in the treatment of Clostridium difficile infection (CDI). Acronym: Ri-CoDIFy 1	INC Research Pty Ltd
Audra de Witt	Oncology	The use of modern genomics in cancer treatment and management for Indigenous patients in Queensland: Indigenous patients' and health professionals' perceptions and perspectives.	

Principal Investigators	Department	Study Title	Funding Source
Dr Sebastian Kang Wen Zhi	Medical Oncology	A retrospective cohort study evaluating administration safety and toxicity management of immunotherapy using the Teleoncology model of care	
Dr Alexander Ngoo	Radiation Oncology	10 Years of Rectal Cancer Treatment in North Queensland: A Propensity Score Matched Retrospective Cohort Study	
Dr Rajesh Sehdev	Emergency	Emergency Examination Authorities and their impacts on North Queensland Hospitals	
Ms Amanda Trezona	Emergency Department - Allied Health	Understanding the perceptions of falls related interventions from older people admitted to ED following a fall: A qualitative study	
Dr Hayley Letson	Emergency and ICU	Trauma Care in the Tropics: A multicentre retrospective analysis	

Research Charts New Depths in oxygen treatment

A Townsville Hospital nurse has been awarded best scientific presentation at the 27th Hyperbaric Technicians and Nurses Association Annual Scientific Meeting for research into how different masks impact on oxygen delivery to injured divers. Hyperbaric medicine unit registered nurse and research co-author Annie Brouff said the research, which was completed with support from the Queensland Emergency Medicine Research Foundation (QEMRF) and Queensland and Divers Alert Network Asia-Pacific, would better inform divers about how to best treat the onset of decompression sickness (the bends) and arterial gas embolism (collectively known as decompression illness), both of which are injuries caused by scuba diving.

“Oxygen is the first-line treatment for decompression illness; however, adequate oxygen supply on dive boats can be challenging with limited storage space and the potential for a vessel to be hours from shore and a decompression chamber,” she said. “In the event that one of these illnesses occurs, it is vital that oxygen is delivered as soon as possible at the highest possible concentration while also being mindful of potential limited oxygen supplies. Oxygen systems commonly used for dive accidents can have two delivery options: a pressure-activated demand valve or constant flow for use with a non-rebreather mask. Using the demand valve, we wanted to find out the most efficient oxygen mask so that divers could be treated quickly and in the most effective way.”

The study recruited 16 active, healthy divers



and monitored their tissue oxygenation using transcutaneous oxygen monitoring, while using the demand valve with different mask configurations. “We use transcutaneous oxygen monitoring to assess patients in the hyperbaric medicine unit to determine whether patients are suitable for treatment in the chamber,” Annie said. “Our research evaluated three different mask types, the intraoral mask, with and without nose clip, oronasal mask, and pocket face mask, to establish which one gave the highest tissue oxygenation when used with the demand valve. “We concluded that of these three different masks, the intraoral mask with a nose clip achieved the highest tissue oxygen levels in healthy divers when used with a demand valve.” Annie said the research was already making changes in the diving industry. “As a result of our findings the James Cook University Dive Club have changed its mask configurations in their oxygen first-aid kit, and it may also influence the masks used on other dive boats,” she said.

Annie said presenting in front of her peers was an exciting experience. “I was proud to represent our health service,” Annie said. “Research can be very rewarding, especially when you can see obvious trends while doing the study. “It was a lovely surprise to win the award, which would not have been possible without the support from Dr Blake.”



Surgical Service Group

Message from the Surgical Service Group Director

The Surgical Service Group continues to develop its research capability and maintained a strong research profile in 2019, in both research and publications.

This Service Group has a desire to build its reputation as research leaders where research drives service delivery improvement with a particular focus on value-based care and the sustainability of evidence based locally delivered services. Key researchers within the Service Group that demonstrate this commitment include Professor Golledge, who along with Dr Ramesh Velu continue to lead a strong research team in vascular surgery with key Clinical Trials underway plus generating a number of publications and research collaborations.

As Cardiology and Cardiac Surgery services continue to build upon their strong local service base it is also reflected in the research activities which include clinical trials and research linked to international registries such as the Aortic Valve insufficiency and ascending aorta aneurysm InternATIOnal Registry: AVIATOR, prospective study being undertaken by Dr Pallav Shah. Mr Nnamdi Mgbemena, Dr Sachin Nayyar and Dr Angela Egan are also noteworthy research contributors in the Cardiac space.

These are only but a few examples across the Surgical Services Group and I want to acknowledge our other outstanding research contributors across surgery who cover a range of specialities and topics. We will continue to work together in order to play to our collective strengths and ensure our research today shapes our service delivery in the future.

Luke Worth

Surgical Service Group Director

Surgical Service Group

Key Researchers

QLD Research Centre for Peripheral Vascular Disease

Important developments for 2019 include:

Completion of the FAME trial a randomised controlled trial of fenofibrate in patients awaiting aortic aneurysm repair.

The report of this study is currently being prepared;

- Completion of a large multi-centre cohort study (n=1080) suggesting the metformin prescription halves requirement for abdominal aortic aneurysm (AAA) repair in people with small AAAs. This research was published as an Editor's choice in the European Journal of Vascular and Endovascular Surgery and has fuelled interest internationally in a large randomised trial of metformin for small AAAs. The applicant has led a funding application to NHMRC to support such a large international trial;
- Completion of a large (n=2773) multi-centre prospective study of patients with a variety of different peripheral artery disease (PAD) presentations which examined the relationship between blood pressure and outcome. The report of this study is published in the Journal of the American Heart Association and suggests that very intense blood pressure lowering in PAD patients may be dangerous. The study also highlights the poor implementation of optimal medical management (OMM) in PAD patients which requires action to develop more effective means to achieve uptake. It also contributed to a PhD currently ongoing;
- Completion and publications of meta-analyses (British Journal of Surgery, Stroke & Diabetic Medicine) highlighting the potential of both structured home exercise programs and hyperbaric oxygen therapy to advance care of patients with PAD and further highlighting the need for better implementation of OMM- further studies will be developed in this area to be applied locally;
- Publications of a number of pre-clinical studies demonstrating potential treatment targets for atherosclerosis and AAA. This research has been published in the highly regarded journals Nature Cardiology & Journal of Clinical Investigation;
- Contribution to published international guidelines on abdominal aortic aneurysm management published in the European Journal of Vascular and Endovascular Surgery.
- We have continued work in our established and novel mouse models of artery weakening and atherosclerosis.
- As previously reported we have successfully established a PVD biobank and cohort with appropriate approvals. We continue to recruit to the biobank and cohort study.

Research Team:

Director
Prof Jonathan Golledge

Research Assistant
Rebecca Webb

Senior Research Scientists
Dr Joseph Moxon
Dr Smriti Krishna

Research Officer
Anne Kraeuter

Postdoctoral Research Fellows
Dr Pacific Huynh
Dr Mal Fernando
Dr Aaron Drovandi

Database Developer
Cedric Hensman

Senior Research Worker
Kathleen Pola

Senior Research Scientist
Dr Ratnesh Gilhotra

Administration Officer
Sandra Burrows

Research Fellow
Dr Sophie Rowbotham

Adjunct Fellow
Dr Dylan Morris

Clinical Trial Manager
Dr Rene Jaeggi

Junior Research Fellow
Dr Vikram Iyer

Senior Clinical Research Worker and Team Leader
Jenna Pinchbeck

PhD Students
Chanika Alahakoon
James Phie
Tejas Singh
Dianna Thomas
Manapurathe

Senior Clinical Research Worker
Lisan Mulvey

Senior Research Worker
Alexandra Golledge

Clinical Research Workers
Cindy Matthews
Alkira Venn
Benjamin Crowley
Zoe Calleja
Julie Randall
Matthew Dally- Watkins

Dr Matthew Bryant

Clinical Director, North Queensland Persistent Pain Management Service (NQPPMS)

Research Grants:

Grant Funding Body Name: Brisbane Diamantina Health Partners

Grant Application Title: Improving health outcomes for Aboriginal and Torres Strait Islander people living with chronic pain: introducing clinical yarning to the communication repertoire of health professionals

Grant Amount: \$609 000

Dr Venkatesh Aithal

Consultant Audiologist

Venkatesh Aithal is a consultant clinical audiologist and head of Audiology Department, The Townsville University Hospital and honorary senior lecturer at University of Queensland. Venkatesh is an active researcher and has led the audiology service at Townsville University Hospital and Community Health, Kirwan for last 17 years. His team has successfully obtained various research grants from New Technology Funding and Evaluation Program, National Health and Medical Research Council, HP Research grant, and Healthy Hearing Program on the assessment of middle ear function in infants and children using wideband tympanometry. He also a member of Hearing Research Unit, School of Health and Rehabilitation Sciences, University of Queensland for the last 11 years). Venkatesh continues to be a member of the Audiological Society of Australia with clinical certificate and a member of the National Rural Health Alliance. He is also International Affiliate of American Speech Language and Hearing Association and member of American Auditory Society. <https://tth.qld.libguides.com/audiology>

Research Team:

Dr Sreedevi Aithal, *Adjunct Senior Lecturer, UQ. Honorary Senior Lecturer UQ, Co-ordinator, Paediatric audiology and Cochlear Implant Clinic*

A/Professor Joseph Kei, *Director, Hearing Research Unit for Children, SHRS, UQ*

Dr Shane Anderson, *Director, ENT services. Townsville Hospital and Health Service.*

Joshua Myers, *Senior Audiologist, PhD student, UQ*

Melissa Forrester, *Audiologist*

Dr David Wright, *Staff Specialist, Dept of ENT*

Katrina Roberts, *Nursing Director, Health and Wellbeing Service Group.*

Research Collaborations:

Hearing Research Unit for Children, Audiology Department. School of health and rehabilitation sciences. University of Queensland, "*Clinical evaluation of wideband absorbance*"

Research Presentations at Conferences:

Workshop: Current trends in middle ear analysis.
Indian Speech and Hearing Association Conference
Feb 8-9, 2019, Bangalore

Seminar on middle ear assessment.

Audiology Seminar
Feb 12, 2019. NITTE Institute of Speech and Hearing

Publications:

1. Aithal V, Aithal S, Manuel A. Normative Wideband Acoustic Immittance Measurements in Caucasian and Aboriginal Children. *American Journal of Audiology*. 2019;28(1):48-61.
2. Almeida OP, Golledge J. Hearing loss and incident psychosis in later life: The Health in Men Study (HIMS). *International Journal of Geriatric Psychiatry*. 2019;34(3):408-14.
3. Aithal S, Aithal V, Kei J and Manuel A. 2019. Effect of negative middle ear pressure and compensated pressure on wideband absorbance and otoacoustic emissions in children. *Journal of Speech Language and Hearing Research*, 62; 3516-3530,
4. Aithal S, Aithal V, Kei J, Anderson S and Liebenberg S. 2019. Eustachian tube dysfunction and wideband absorbance measurement at tympanometric peak pressure and 0 daPa. *Journal of the American Academy of Audiology*, 30, 781-791

THHS Neurosurgery and Pharmacy with JCU Pharmacology Group

Research Team:

Supervisors

A/Prof Laurence Marshman
Dr Maria Hennessy
Dr Ola Otakui

PhD Candidates

Ms Claire Moffatt
Ms Carol Flavell
Mr Kelvin Robertson

Biochemistry and Physiology advisor

Dr Donna Rudd

PhD Awards:

Prospective randomised study of Gabapentin versus pregabalin in the treatment of chronic sciatica

Kelvin Robertson, PhD
Awarded 2019

Psychological health outcomes after chronic subdural haematoma: a prospective RCT

Claire McMillan, PhD
Pending

Chronic low back pain: diagnostic classification, intervention and outcome

Carol Flavell, PhD
Awarded 2019

Publications:

1. Thomas PW, Michell PS, Marshman LAG. Early Post-Operative Morbidity after Chronic Subdural Haematoma: Utility of POSSUM, ACS-NSQIP and ASA scoring. *World Neurosurgery* 2019 Jan 2. pii: S1878-8750(18)32942-5.
2. Robertson K, Marshman LAG, Plummer D, Downs E: Proper or improper use of the cross-over design in chronic sciatica? Letter. *JAMA Neurology* 2019. doi:10.1001/jamaneurol.2019.0873
3. Thomas PW, Rudd D, Moffatt CE, Marshman LAG. S-100 β in Chronic Subdural Haematoma. Prospective cohort study. *Journal of Clinical Neuroscience* 2019 S0967-5868(18)32078-2. doi: 10.1016/j.jocn.2019.05.058. [Epub ahead of print]
4. Marshman L. Standardized assessment of outcome and complications in chronic subdural hematoma: results from a large case series. Letter. *Acta Neurochirurgica* 2019; 161(12), 2483-2484, doi: 10.1007/s00701-019-04090-1. [Epub ahead of print]
5. Mebberson K, Colditz M, Marshman LAG, Thomas PAW, Mitchell PS, Robertson. Prospective Randomized Placebo-controlled Double-blind Clinical study of Adjuvant Dexamethasone with Surgery for Chronic Subdural Haematoma with post-operative Subdural Drainage: Interim analysis. *Journal of Clinical Neuroscience* 2019; Sep 3. pii: S0967-5868(19)31364-5. doi: 10.1016/j.jocn.2019.08.095. [Epub ahead of print]
6. Thomas PAW, Marshman LAG, Rudd D, Moffat C, Mitchell PS: The Growth and Resorption of Chronic Subdural Hematomas: Gardner, Weir and the 'Osmotic' Hypothesis Revisited. *World Neurosurgery* 2019 Sep 4. pii: S1878-8750(19)32360-5. doi: 10.1016/j.wneu.2019.08.204. [Epub ahead of print]
7. Flavell CA, Marshman LG, Gordon SJ Does Pain Reduction with Spinal Anesthetic Steroid Injections Alter Transversus Abdominis 'Core Tone' in Chronic Low Back Pain? *International Journal of Allied Health Sci & Practice* 2019.
8. Marshman LA: Letter to the Editor: Influence of Gender on Occurrence of Chronic Subdural Hematoma; Is It an Effect of Cranial Asymmetry? *Korean Journal of Neurotrauma* 2019;10:82–85

Surgical Service Group

Research Publications

1. Thomas PW, Michell PS, Marshman LAG. Early Post-Operative Morbidity after Chronic Subdural Haematoma: Utility of POSSUM, ACS-NSQIP and ASA scoring. *World Neurosurgery* 2019 Jan 2. pii: S1878-8750(18)32942-5.
2. Robertson K, Marshman LAG, Plummer D, Downs E: Proper or improper use of the cross-over design in chronic sciatica? Letter. *JAMA Neurology* 2019. doi:10.1001/jamaneurol.2019.0873
3. Thomas PW, Rudd D, Moffatt CE, Marshman LAG. S-100 β in Chronic Subdural Haematoma. Prospective cohort study. *Journal of Clinical Neuroscience* 2019 S0967-5868(18)32078-2. doi: 10.1016/j.jocn.2019.05.058. [Epub ahead of print]
4. Marshman L. Standardized assessment of outcome and complications in chronic subdural hematoma: results from a large case series. Letter. *Acta Neurochirurgica* 2019; 161(12), 2483-2484, doi: 10.1007/s00701-019-04090-1. [Epub ahead of print]
5. Mebberson K, Colditz M, MarshmanLAG, Thomas PAW, Mitchell PS, Robertson. Prospective Randomized Placebo-controlled Double-blind Clinical study of Adjuvant Dexamethasone with Surgery for Chronic Subdural Haematoma with post-operative Subdural Drainage: Interim analysis. *Journal of Clinical Neuroscience* 2019; Sep 3. pii: S0967-5868(19)31364-5. doi: 10.1016/j.jocn.2019.08.095. [Epub ahead of print]
6. Thomas PAW, Marshman LAG, Rudd D, Moffat C, Mitchell PS: The Growth and Resorption of Chronic Subdural Hematomas: Gardner, Weir and the 'Osmotic' Hypothesis Revisited. *World Neurosurgery* 2019 Sep 4. pii: S1878-8750(19)32360-5. doi: 10.1016/j.wneu.2019.08.204. [Epub ahead of print]
7. Flavell CA, Marshman LG, Gordon SJ Does Pain Reduction with Spinal Anesthetic Steroid Injections Alter Transversus Abdominis 'Core Tone' in Chronic Low Back Pain? *International Journal of Allied Health Sci & Practice* 2019.
8. Marshman LA: Letter to the Editor: Influence of Gender on Occurrence of Chronic Subdural Hematoma; Is It an Effect of Cranial Asymmetry? *Korean Journal of Neurotrauma* 2019;10:82–85
9. Almeida OP, Golledge J. Depression, antidepressants and the risk of cardiovascular events and death in older men. *Maturitas*. 2019;128:4-9.
10. Carrivick S, Alfonso H, Golledge J, Clancy P, Flicker L, Gunton JE, et al. Differential associations of ferritin and 25-hydroxyvitamin D with fasting glucose and diabetes risk in community dwelling older men. *Diabetes/metabolism research and reviews*. 2019:e3172.
11. Coory JA, Parr AF, Wilkinson MP, Gupta A. Efficacy of suprascapular nerve block compared with subacromial injection: a randomized controlled trial in patients with rotator cuff tears. *Journal of Shoulder and Elbow Surgery*. 2019.
12. Flavell CA, Marshman LG, Gordon SJ. Measurement of transversus abdominis activation in chronic low back pain patients using a novel standardized real-time ultrasound imaging method. *Ultrasound*. 2019;27(1):31-7
13. Fotis K, Alexander P, Sax J, Reddie I, Kang CY, Chandra A. Macular Detachment for the Treatment of Persistent Full-Thickness Macular Holes. *Retina*. 2019 Oct;39.
14. George S, Humphreys S, Williams T, Gelbart B, Chavan A, Rasmussen K, et al. Transnasal Humidified Rapid Insufflation Ventilatory Exchange in children requiring emergent intubation (Kids THRIVE): A protocol for a randomised controlled trial. *BMJ Open*. 2019;9(2).
15. Golledge J. Abdominal aortic aneurysm: update on pathogenesis and medical treatments. *Nature Reviews Cardiology*. 2019;16(4):225-42.
16. Golledge J, Singh TP. Systematic review and meta-analysis of clinical trials examining the effect of hyperbaric oxygen therapy in people with diabetes-related lower limb ulcers. *Diabetic Medicine*. 2019.
17. Golledge J, Singh TP, Alahakoon C, Pinchbeck J, Yip L, Moxon JV, et al. Meta-analysis of clinical trials examining the benefit of structured home exercise in patients with peripheral artery disease. *British Journal of Surgery*. 2019;106(4):319-31
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19. Lamb LS, Davis TME, Forbes J, Irrgang F, Golledge J, Flicker L, et al. Response to Letter to the Editor: "Advanced Glycation End Products and esRAGE Are Associated With Bone Turnover and Incidence of Hip Fracture in Older Men". *The Journal of clinical endocrinology and metabolism*. 2019;104(3):684-5.
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21. Marshman LAG. Is there any benefit from short-term perioperative antiepileptic prophylaxis in patients with chronic subdural haematoma? *Neurochirurgie*. 2019;65(2-3):98-9.
22. Moffatt CE, Hennessy MJ, Marshman LAG, Manickam A. Long-term health outcomes in survivors after chronic subdural haematoma. *Journal of Clinical Neuroscience*. 2019.
23. Myers J, Kei J, Aithal S, Aithal V, Manuel, A. Longitudinal Development of Wideband Absorbance and Admittance Through Infancy. *Journal of speech, language, and hearing research : JSLHR*. 2019;62(7):2535-52.
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29. Ponangi U, Yadav R, Latouf S. Balloon Mitral Valvotomy in Indigenous Patients With Rheumatic Heart Disease. *Heart, Lung & Circulation*. 2019;28:S54-S.
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31. Popovic C, Yong M, Saxena P, Yadav S. Less Is More: Sutureless Aortic Valve Replacement Into Valsalva Graft. *Heart, Lung & Circulation*. 2019;28:S110-S.
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36. Singh TP, Wong SA, Moxon JV, Golledge J. Systematic review and meta-analysis of the association between intraluminal thrombus volume and abdominal aortic aneurysm rupture. *Journal of Vascular Surgery*. 2019.
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39. Tiwari AK, Mar AA, Fairley MA. Serratus anterior plane block for upper abdominal incisions. *Anaesthesia and Intensive Care Journal*. 2019;47(2):197-9.
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41. Wiemers PD, Marney L, Yadav S, Tam R. A Review of Coronary Artery Bypass Grafting in the Indigenous Australian Population. *Heart, Lung & Circulation*. 2019;28(4):530-8.
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48. Nayyar S, Fairley L. Letter by Nayyar et al regarding article "Intracardiac delineation of septal conduction in left bundle branch block patterns: Mechanistic evidence of left intra-Hisian block circumvented by His pacing". *Circulation*. 2019 Oct; 140: e711-e712.

Surgical Service Group

Approved Research

Principal Investigators	Department	Study Title	Funding Source
Dr Andrew Evans	General Surgery	Rural Generalist (General Practitioner) Surgeons: Impacts on Practice?	
Dr Mohammadali Zad	Gastroenterology	Endoscopic ultrasonography-guided drainage of pancreatic fluid collections using a novel lumen-apposing metal stent Acronym: EUS Pancreatic	
Prof Jonathan Golledge	Vascular Surgery	Metformin for Treating Peripheral Artery Disease-Related Walking Impairment (MERIT)	
Dr Pieter Weemaes	Intensive Care Unit	Transport of ROTEM® Samples by Pneumatic Delivery Study	
Mr Nnamdi Mgbemena	Cardiothoracic Surgery Cardiology Physiotherapy	Prediction of Lung Function and Health-Related Quality of Life Using Handgrip Strength in Cardiac Patients	
Dr Pallav Shah	Cardiothoracic Surgery / Cardiology	Aortic Valve insufficiency and ascending aorta aneurysm InternATIOnal Registry: AVIATOR, a prospective study	
Mrs Melissa Moore	Cardiac Services - Heart Failure Service	Nurse Practitioner Clinics vs. Usual Care: What percentage of HFrEF patients achieve maximal tolerated beta blocker therapy within six months?	
Dr Sally Meade	Surgery	Australian Breast Device Registry	
Mr Nameer van Oosterom (UQ PhD Student)	Orthopaedic	Investigating Thromboprophylaxis in Orthopaedic Surgery within Queensland Health Hospitals (ITOS Study)	

Principal Investigators	Department	Study Title	Funding Source
Dr Ramesh Velu	Vascular & Endovascular Surgery	Metformin in the management of abdominal aortic aneurysm Acronym: MAGIC	SERTA
Dr Angela Egan	Cardiac Services - Cardionthoracics	A Randomized, Double-Blind, Placebo Controlled, Phase 3 Study to Evaluate the Efficacy and Safety of QPI-1002 For the Prevention of Major Adverse Kidney Events (MAKE) in Subjects at High Risk for Acute Kidney Injury (AKI) Following Cardiac Surgery Acronym: QRK309	CTI Clinical Trial & Consulting Services
Dr Sachin Nayyar	Cardiology	Tissue microarchitecture-information based ventricular tachycardia ablation	SERTA
Dr Joel Tuckett	Maxiofacial	Do prophylactic antibiotics in conservatively managed mid-face fractures or preoperative antibiotics in surgically managed mid-face fractures reduce the rate of infection?	
Dr Lisa Scupham	Plastic and reconstructive surgery	Time to definitive coverage in traumatic lower limb injuries in a regional centre	

Corporate Services Research

Nursing and Midwifery Research Group

The Melinda and Bill Gates' Foundation invited the Nursing and Midwifery Research Group to present our paper "Maternity service organisational interventions that aim to reduce caesarean section: a systematic review and meta-analyses" for presentation at the 'Averting an Impending Cesarean Section Disaster in LMICs' workshop in New York; one of only 40 papers presented internationally

Research Team:

Nurse Researcher
Dr Wendy Smyth

PhD Candidate
Anne-Marie Lawrence

Professor of Nursing and Midwifery
Prof Cate Nagle

Nurse Researcher(interim)
Patricia Clarke

Research Collaborations:

Sunshine Coast University Hospital, Sunshine Coast University, James Cook University. *"Best practice in the use of an integrated electronic health record in maternity care environments"*

James Cook University. *"Optimising Freedom of Movement Intervention for Low Risk Primiparous Women Who Labour in the Conventional Birth Suite Setting."*

James Cook University, Deakin University, Plymouth University. *"Collaborative alliances in Victoria, Australia"*

James Cook University, Deakin University. *"Maternal and Neonatal birth outcomes associated with anaemia in pregnancy in Ghana."*

James Cook University, Deakin University. *"Contextual factors contributing to breastfeeding problems of late preterm infants in a Special Care Nursery."*

Peer-reviewed Conference Presentations:

1. Smyth, W., McArdle, J., Hughes, K., Wicking, K., Nagle, C., & Quayle, K. (2019, 11-13 April). Helping renal patients with central venous lines to maintain the integrity of their dressings while attending to personal hygiene in the tropics. Poster presentation at the 11th Congress of The Vascular Access Society, Rotterdam, The Netherlands.
2. Lane, N., Smyth, W., & Nagle, C. (2019). Reducing discharges against medical advice: A deadly nursing initiative. Poster presented at the Australian College of Nursing, National Nursing Forum 2019, Hobart, Tasmania. Winner -Best Poster – Universal Health Care stream
3. Smyth, W., McArdle, J., Hughes, K., Wicking, K., Nagle, C., & Quayle, K. (2019). Facilitating choice in personal hygiene options for renal patients in the tropics with a central venous line: a multi-phase study. Paper presented at the Australian College of Nursing, National Nursing Forum 2019, Hobart, Tasmania.
4. McIntosh, C., Smyth, W., Elvin, A., Birks, M., & Nagle, C. (2019). Human-robot interactions: a novel way to improve health literacy in preventing influenza. Paper presented at the Australian College of Nursing, National Nursing Forum 2019, Hobart, Tasmania.
5. Smyth, W., McIntosh, C., Elvin, A., Nagle, C., & Birks, M. (2019). The pulling power of Pepper: An exploratory study of a social humanoid robot in an acute health setting. Poster presented at the Australian College of Nursing, National Nursing Forum 2019, Hobart, Tasmania.
6. Abernethy, G., Hollins, A., Harte, J., Smyth, W., & Ray, R. (2019). Q fever and GPs - Q fever knowledge and follow-up practices of northern Australian rural general practitioners [presentation available via YouTube]. Paper presented at the 15th National Rural Health Conference, Hobart, Tasmania.

Corporate Services

Research Publications

1. Chapman A, Nagle C. Maternity service organisational interventions that aim to reduce caesarean section: A systematic review and meta-analyses. *BMC Pregnancy and Childbirth*. 2019;19(1).
2. Archer, V, Murray, H. Smyth, Wendy; Nagle, C (2019) Trialling an option for the frail elderly to attend to their own hygiene safely at home. *Australian Nursing and Midwifery Journal*,26(7):46
3. Chapman, A., Nagle, C., Bick, D., Lindberg, R., Kent, B., Calace J., and Hutchinson, AM. (2019) A systematic review and meta-analyses of organisational interventions to reduce caesarean sections. *Journal of Paediatrics and Child Health*, 55(Suppl. 1) p37
4. Dooley, D., East, L., Nagle, C. (2019) Emotional intelligence: a qualitative study of student nurses' and midwives' theoretical and clinical experience *Contemporary Nurse*, 55;4-5, 341-350
5. Rasmussen, B., Nankervis, A., Skouteris, H., McNamara, C., Nagle, C., Steele, C., Bruce, L., Holton, S. Wynter, K Psychological wellbeing among new mothers with diabetes: Exploratory analysis of the Postnatal Wellbeing in Transition Questionnaire *Sexual and Reproductive Health*22: e1-6
6. Chen JC, Jenkins-Marsh S, Flenady V, Ireland S, May M, Grimwood K, et al. Early-onset group B streptococcal disease in a risk factor-based prevention setting: A 15-year population-based study. *Australian & New Zealand Journal of Obstetrics & Gynaecology*. 2019;59(3):422-9.
7. Clay-Williams R, Lane P, Senthuran S, Johnson A. Improving decision making in acute healthcare through implementation of an intensive care unit (ICU) intervention in Australia: A multimethod study. *BMJ Open*. 2019;9(3).
8. Hutchinson AM, Nagle C, Kent B, Bick D, Lindberg R. Organisational interventions designed to reduce caesarean section rates: a systematic review protocol. *BMJ Open*. 2018;8(7):e021120.
9. Kothe E, Bailey C, Weiner C, Nagle C, Nowson C, Hill B, et al. An investigation of Australian midwifery curricula for obesity management and health behaviour change training. *Nurse Education in Practice*. 2019;36:54-7.
10. Nagle C, McDonald S, Morrow J, Kruger G, Cramer R, Couch S, et al. Informing the development midwifery standards for practice: A literature review for policy development. *Midwifery*. 2019;76:8-20.
11. Rasmussen B, Nankervis A, Skouteris H, McNamara C, Nagle C, Steele C, et al. Factors associated with breastfeeding to 3 months postpartum among women with type 1 and type 2 diabetes mellitus: An exploratory study. *Women and Birth*. 2019.
12. Wong Shee A, Nagle C, Robertson C, Frawley N, McKenzie A, Lodge J. Implementing an intervention to promote normal labour and birth: A study of clinicians' perceptions. *Midwifery*. 2019;70:46-53.
13. Wright, K., Verney, K., Brennan, D., Lindsay, D., Lindsay, D., & Smyth, W. (2019). Administrative staff self-reported long-term conditions: Findings from a regional Australian health service. *International Journal of Workplace Health Management*, 12(6), 483-494. doi:10.1108/IJWHM-01-2019-0007
14. Smyth, W., Al Mamun, A., & Shields, L. (2019). Multidisciplinary perceptions of working with children and their parents in rural and remote Australian hospitals. *Nordic Journal of Nursing Research*, 39(4), 226-232. doi:https://doi.org/10.1177%2F2057158519881745
15. Lindsay, D., Brennan, D., Lindsay, D., Holmes, C., & Smyth, W. (2019). Conceal or reveal? Patterns of self-disclosure of long-term conditions at work by health professionals in a large regional Australian health service. *International Journal of Workplace Health Management*, 12(5), 339-351
16. Hollins, A., Abernethy, G., Smyth, W., Ray, R., & Harte, J. (2019, 25th March). Q fever knowledge and follow-up practices of northern Australian rural general practitioners. Peer-reviewed paper presented at the 15th National Rural Health Conference, Hobart, Tasmania, Australia. Available from ruralhealth.org.au

Corporate Services

RGO Approved Research

Principal Investigators	Department	Study Title	Funding Source
A/Prof Clare Harvey	Nursing Services	The Evaluation of the Nurse Navigator/ Health Navigator Model: A Trans-Tasman Study	
Ms Amanda Kivic	Hospital in the Home Service	A case for the use of governance and “SAFEST” strategies to improve healthcare service efficiency	
Dr Paul Lane	Medical Governance & Professional Standards	Evaluation of a Peer Support Program (PSP) Pilot at the Townsville Hospital	SERTA
A/Prof David Lindsay	Nursing & Midwifery	Students in Nursing (SiN) and Students in Midwifery (SiM) - exploring the relationships between these roles and student learning.	
Dr Chris Bourke	Corporate	Hospital CEO perceptions about managing institutional racism	
Dr Lynn Woodward	Medical	Australian Institute of Tropical Health and Medicine Biobank Acronym: AITHM Biobank	
Prof Cate Nagle	Nursing & Midwifery Research Unit	Development and evaluation of online mental health education for clinicians	SERTA
Mr Rudolf Schnetler	Clinical Information Services	Machine learning to reduce over ordering of pathology tests	SERTA
Louisa D'Arietta	Library	Exploring health professionals' motivation to undertake research in tropical North Queensland	SERTA
Dr Aaron Kennedy	Whole of THHS	Mackay HealthPathways – HANDI Initiative	
Ms Denise Craig	HHS-wide survey of Medical Nursing/Midwifery and Allied Health Clinicians	An exploration of the enablers and barriers to hospital-based doctors fulfilling Advance Care Plans (ACPs) of people living with neurodegenerative disease in Queensland.	
Ms Tammy Allen	Public health	Strengthening community empowerment approaches to Aedes sp. mosquito management in a high-income country: comparative case studies within Queensland, Australia.	



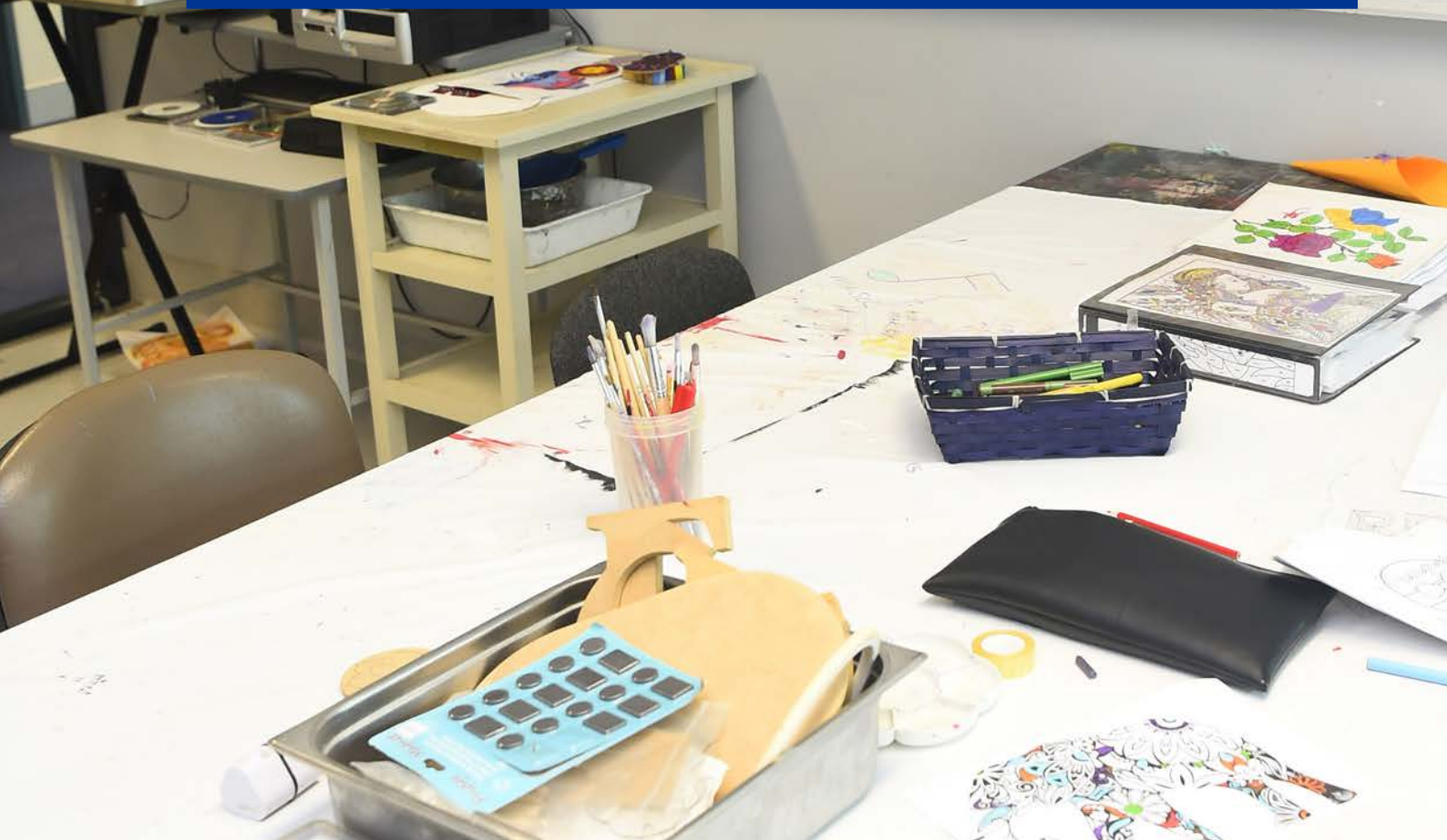
Mental Health Service Group

Message from the Mental Health Service Group Director

The Surgical Service Group continues to develop is The Mental Health Service Group continues to support staff to participate and build their capacity to engage in clinical research. Several of our staff have enrolled in PhD studies, and we welcome their pursuit of gaining knowledge and experience in the area of research. Our focus has been to support our staff and build our capacity in clinical research.

Professor Brett McDermott has been active in supporting several collaborative projects and publications this year. The Mental Health Service Group looks forward to continuing to build our capacity and engagement in clinical research in the coming year. Ann Marie Mallett

Ann Marie Mallett
Mental Health Service Group Director



Mental Health Service Group

Key Researcher

This year has seen an increased number of staff commencing research projects within the mental health service group. This is a great achievement for the service group as we seek to further develop the skills of staff to undertake research and will increased research activity and publications in future years. There have been several activities within the Child and Youth Services that have progressed to submitting articles for publication – including exploring the experiences of Indigenous Youth presentations and service experience. A number of medical staff have been supported to progress Quality and Research activities in the following areas of childhood trauma, melatonin use among child psychiatrist, medical emergency training for doctors and nurses, after-hours registrar time in motion study and hair cortisol as a novel biomarker for mental illness in children.

Professor McDermott continues to support mental health research with several collaborative projects including “Prevalence of Anxiety and Depression and their Associations with Professional Quality of Life among Health Clinicians in China” with Dr Wendy Li.

The MHSG is working to build the research culture at activity in coming years through supporting a number of staff in their post graduate studies, with a number of staff enrolled in PhD studies

Research Team:

Professor McDermott, *Professor of Psychiatry*

Corianne Richardson, *CNC / Senior Research Officer*

Mental Health Service Group

RGO Approved Research

Principal Investigators	Department	Study Title	Funding Source
Dr Michael Daubney	CAYAS	AMYOS Service Evaluation	
Dr Mark Mayall	Adolescent and Young Adult Mental Health Service - Kirwan	High Risk of Autoimmune Psychosis Study H-RAP Study	



Pathology Queensland

Townsville's Pathology Queensland recognised for melioidosis state-wide centre of excellence

Townsville Hospital's pathology laboratory was been formally recognised as the state-wide centre of excellence in the diagnoses of exotic tropical disease melioidosis. The title of State Reference Laboratory for melioidosis was bestowed on Townsville's pathology laboratory by Health Support Queensland – which manages 35 public pathology laboratories across Queensland.

Melioidosis is a disease caused by bacteria contained in the soil in North Queensland, with the bacterium usually entering the body via inhalation or cuts and sores in the skin. It has a mortality rate of about 20 per cent. A State Reference Laboratory means Townsville is recognised as a centre of excellence for diagnosing melioidosis and is actively promoted as a source of expertise on melioidosis for pathologists across Queensland.

Director of microbiology and pathology at Townsville's pathology laboratory Dr Robert Norton said other pathology laboratories across Australia will now have a single source of expertise for any advice or testing related to melioidosis. Dr Norton added that Townsville was the first laboratory in Australia to identify the soil-borne organism in Australia and had significant expertise in diagnosing and researching the pathogen. "Melioidosis can be difficult to diagnose through serology and even cultures and can look very similar to a more common disease called pseudomonas," Dr Norton said. "Pseudomonas is treated very differently to melioidosis which is why it is so important that a correct diagnosis is made so the correct treatment can be administered.

"Townsville has been at the forefront of research and diagnostics of melioidosis for a very long time, so it is nice to receive this recognition of our expertise." Townsville pathology staff had collectively published 40 peer-reviewed journal articles and contributed to the development of an international guideline for diagnosing the condition as part of the Centre for Disease Control in Atlanta. Melioidosis is caused by an environmental pathogen *Burkholderia pseudomallei* which is present in the soil across North Queensland. Dr Norton explained that there can be far reaching benefits to the recognition as a centre of excellence as occasionally travellers to the region will pick up the pathogen and return home where they become unwell. "The real benefit of being acknowledged as a State Reference Laboratory will be to assist our fellow laboratories across Australia in correctly diagnosing melioidosis," he said. "For laboratories in Brisbane, Sydney or Melbourne this will be a bacterium they have never seen but should they suspect melioidosis they just need to pick up the phone and we will assist with either advice or testing."

PQ general manager Brett Bricknell said: "We are extremely proud of the work and expertise of the staff at our Townsville laboratory and believe they are extremely worthy of this recognition. "Being a state reference laboratory tells the community and the health care system that Pathology Queensland in Townsville a leader in melioidosis." There have been 22 confirmed cases of melioidosis across the Townsville Hospital and Health Service catchment in 2019 and sadly there have been four deaths.

Pathology Queensland

Research Publications

1. Callum J, Armstrong M. Prevalence of scabies in Sanma Province, Vanuatu. Transactions of the Royal Society of Tropical Medicine and Hygiene. 2019;113(8):500-2
2. Gassiep I, Armstrong M, Norton RE. Identification of Burkholderia pseudomallei by Use of the Vitek Mass Spectrometer. Journal of Clinical Microbiology. 2019;57(5).
3. Gassiep I, Bachmeier C, Hendry S, Emeto TI, Armstrong M, Sangla K, Heather, C. et al. Antimicrobial stewardship in diabetic ketoacidosis: a single centre experience. Internal Medicine Journal. 2019
4. Sikder S, Rush CM, Govan BL, Norton RE. Reply to Dale and Shulman. The Journal Of Infectious Diseases. 2019;219(4):675-6.
5. Berger D, Smith F, Sabesan V, Huynh A, Norton R. Paediatric Salmonellosis—Differences between Tropical and Sub-Tropical Regions of Queensland, Australia. Tropical Medicine and Infectious Diseases. 2019, 4, 61; doi:10.3390/tropicalmed4020061.
6. Gassiep, Armstrong M, Norton R. Utility of the Legionella urinary antigen. 2019, Internal Medicine Journal. 2019 Aug;49(8):1050-1051. doi: 10.1111/imj.14381

Pathology Queensland

RGO Approved Research

Principal Investigators	Department	Study Title	Funding Source
Dr Jane Royle	Haematology	Haematological manifestations of acute Q fever: a retrospective review of a North Queensland centre and literature review.	
Miss Madeleine Kelly	Pathology	The Utility of Enzyme Immunoassay IgM testing in the diagnosis of congenital syphilis	
A/Prof Brenda Govan	Microbiology	Comparison of the cellular and humoral immune responses in Q fever exposure	JCU