



## **Contents**

03 05 13

07

#### Acknowledgements

Peninsula Health acknowledges the contribution made by all staff involved in research. The Research Report 2018 showcases some of these projects, and recognises the many ongoing projects and commercially sponsored, collaborative group and investigator-initiated trials in areas such as Allied Health, Anaesthesia, Cardiology, Cancer Services, Community Health, Emergency Medicine, Intensive Care, Mental Health, Nursing and Thoracic Medicine that have the potential to improve the care we offer our patients.

Office for Research. Manager: Lee-Anne Clavarino. Office Co-ordinator: Kim Sherry. Quality Co-ordinator: Stacey Stefanovic. Editor: Amy Johnston. Writers: Steve Pearce, Jessica Mills. Design: Melissa Arbaci. Photography: David Patston. © Peninsula Health 2018 Cover Image: Associate Professor Virginia Plummer, Fiona Reed, Kim Heriot

## Welcome to the 2018 Peninsula **Health Research Report**

In this year's Report, we are sharing stories from diverse areas of the health service, showcasing how our research is making a real difference to patients across Frankston and the Mornington Peninsula.

The health service is providing increased resources and focus to research, and that is delivering significant results. As you will read in this Report, it has been another successful year for our research program, led by Professor of Medicine, Velandai Srikanth.

Professor Srikanth and Dr Nadine Andrew received significant grants from the National Health and Medical Research Council (NHMRC), to continue their research into chronic disease and stroke, both of which are key focus areas in our research strategy. Professor Jamie Lavland was also recognised for his work in cardiovascular disease, with an NHMRC grant to fund research as part of an international trial investigating improving outcomes for heart attack patients. Dr Cylie Williams was awarded the Dean's Prize for Early Career Researcher in the Faculty of Medicine, Nursing and Health Sciences, at Monash University.

This year the Human Research Ethics Committee (HREC) farewelled Ms Jan deClifford, a member for 25 years. As a senior pharmacist, Jan had been the link between the HREC and the Drugs and Therapeutics Committee,

and provided specialist advice on drug trials. We were also saddened by the passing of Ms Sharon White, Operations Director and a valued HREC member.

This Report highlights the efforts of those who work in Surgery, Nursing, General Medicine, Allied Health, Oncology, and in our Women's Health Unit at Frankston Hospital. All of our clinical teams, across acute, sub-acute and community services, are dedicated to improving patient outcomes through great care, and increasing involvement with research..

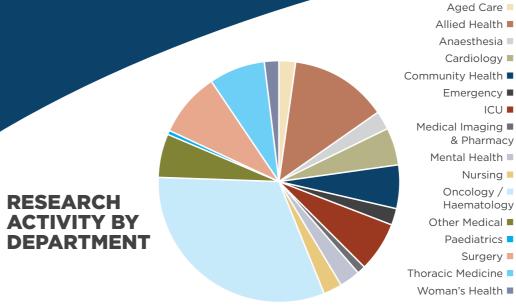
I'm sure you will enjoy reading this year's Research Report.

Regards,

Dr Tim Williams Executive Director, Medical Services and Clinical Governance

Executive Sponsor for Research





**PHD STUDENTS** 2018



Allied Health



Intensive Care Unit

Medicine (Academic Unit)



Surgery



Thoracic Medicine

**TOTAL 19** 

#### RESEARCH ACTIVITY

	2017/18	2016/17
Projects considered for approval	113	94
Publications	93	85
Abstracts submitted	86	78
Multi-site projects authorised	36	33



## A message from the Professor of Medicine

There is no doubt that we will make significant advances in research that make a difference to the health of our community over the coming years

I am very pleased to present to you the 2018 Peninsula Health Research Report. In this report you will see a snapshot of the types of research that we conduct to inform us on how best to provide excellent health care to our community. As you will see, these examples of research span different fields and disciplines, examine important health issues from birth to old age, and also approach health issues from different angles such as prevention, treatment, recovery and safety.

These articles reflect the steady growth in research that is happening at Peninsula Health, and the support provided by the health service and its partner organisation, Monash University. This growth is reflected in the increase in the number of clinical academic staff, research-specific staff, postgraduate students, and funding acquired to support such research. In particular, researchers at Peninsula Health were successful in obtaining substantial competitive grant funding (~9 million dollars) from the National Health and Medical Research Council and other sources for a range of collaborative studies. These studies address our strategic research priorities of chronic disease and health related to ageing, such as stroke, heart attacks, diabetes, and dementia. This is an excellent achievement within the first two years of investment towards the Peninsula Health Research Strategic Plan. Over the coming years we hope to build on this success and begin to develop areas of health research that are at a point of strategic readiness to translate their findings into practice.

Our partnership with Monash University is now well established and flourishing. Clear steps are underway towards finalising the plans for the forthcoming Research and Education building, a combined investment from both Peninsula Health and Monash University which will significantly enhance our ability to deliver excellent graduate education and conduct high quality research. We now have collaborative research beginning to occur in the field of Addiction Medicine together with colleagues in the newly formed Monash Addiction Research Centre (MARC) on the Peninsula Campus of Monash University. We also look forward to the development of the Rehabilitation, Ageing and Independent Living Institute (RAIL) on the same campus, which will be an important collaborative organisation for research into aged care and rehabilitation.

Peninsula Health has some of the most advanced systems of electronic (digital) health record management in Australia. We are working towards maximising the benefit to our patients and community by making efficient use of such routinely collected health information. Our Monash University partnership also gives us access to some of the best research platforms in the world that can enable such digital health research. These include the Monash e-research, bioinformatics and the Health Data Platforms. We believe that such digital health research platforms will provide Peninsula Health researchers with the tools that they require to answer the important health-related questions that are relevant to our community on the Peninsula. We anticipate significant progress in this exciting area over the coming months.

My warmest congratulations to all our patients, staff and collaborators for making all this research possible. I hope you enjoy reading this report.

Regards Velandai Srikanth Professor of Medicine



Positive words + Soft words + Smart and Tidy Clear and mutual expectations + Calm down methods

The Safewards model and interventions were developed in the NHS in the United Kingdom by Professor Len Bowers with the goal of improved safety, reduced conflict events and reduced reliance on restrictive interventions in acute psychiatry settings. The aim was to make acute mental health wards calmer, where people could safely recover, work and visit. Peninsula Health's Executive Director of Nursing and Midwifery, Fiona Reed, saw the opportunity to translate the program's success to other clinical settings – and initiated a world-first pilot of the Safewards model in an acute medical inpatient ward at Frankston Hospital.

Ten interventions were implemented over ten months in Ward 5GS. Each of the 10 interventions has a detailed strategy sitting behind it, but importantly these interventions are visible and straightforward for the staff who are implementing the changes and the patients who are being cared for.

"We have a 'Get to Know You' board," says Kim Heriot Nurse Unit Manager. "We encourage all our staff to be as open and honest as they can be in divulging some information about their lives so that staff and patients can get to know each other."

"We looked at the environment, in terms of creating a welcoming and calmer environment for patients and families," continues

Virginia Plummer, Associate Professor Nursing Research. "And we looked at the tools we use in communication for handover for staff, and the language we employ. Importantly we looked at how we could evaluate the Safewards training."

"A mixed method research design was employed because of the potential for significant changes in the ward. All clinical  $\,$ and non-clinical staff participated in training," explains Virginia. "Participation in evaluation of the model was voluntary through pre and post training, anonymous surveys and focus groups. Patients and their families were invited to comment on their experiences through a diary."

The results were encouraging. Most staff rated the model as very good to excellent and felt that Safewards had changed their approach to work and that of their colleagues. Staff also reported feeling safer and more positive about being in the ward. Patients and families wrote with appreciation about new ways of de-stressing and relaxing. Overall the ward was described as cleaner, calmer, safer, and more positive and the work was more rewarding.

"The Safewards program Peninsula Health has implemented is a world-first in an acute medical hospital setting," says Fiona. "In the acute medical care wards we are caring for patients with very similar conditions to those in mental health – with high rates of clinical aggression, resulting in conflict between staff, patients and sometimes family members."

"Safewards is about identifying points of care that may trigger a conflict response, or an issue around communication, and then targeted interventions to prevent that conflict from escalating," explains Virginia. "We identified a number of interventions based on the Safewards model which would be appropriate in the acute medical health care setting, and prepared for staff training and implementation."

With the success of the program on 5GS, Peninsula Health will now roll out the Safewards model in both Emergency Departments at Frankston and Rosebud Hospitals in an 18-month trial, with the ultimate aim to expand Safewards across the entire health service.

The Safewards program is driven at Peninsula Health by Executive Director of Nursing and Midwifery, Fiona Reed, Associate Professor Virginia Plummer, Nurse Unit Manager of Ward 5GS at Frankston Hospital, Kim Heriot and Project Manager Kate Bendall.

The project was funded by the Department of Health and Human Services.

#### Patient and family members' anonymous diary entries on Ward 5GS during the Safewards pilot study:

"I'm guessing one of the main values here is dignity. I saw everyone use this every day in every situation. Thank you for living your values."

"Fantastic! A place to escape from the surrounding madness of noise. Thanks to all the nursing staff for your patience, understanding and caring."

"Lovely space, so calming and peaceful to gather your thoughts at difficult times."

"Thank you, thank you, thank you! Finally someone gets it. A nice comfortable place for people to sit and relax and de-stress."

## Investigating the prevention of vaginal birth trauma

- + Approximately 3,000 babies are born every year at Frankston Hospital
- + Obstetric anal sphincter injuries are the most common cause of female anal incontinence
- + More than 6,500 women across Australia suffer obstetric anal sphincter injuries each year

Source: Australian Atlas of Healthcare

Peninsula Health is one of six health services in Victoria taking part in research to inform best practice guidelines for preventing and managing a severe form of vaginal birth trauma.

"An obstetric anal sphincter injury (OASIS) is a complication of a vaginal birth, whether it's a normal birth or an instrumental birth," explains Dr Jolyon Ford, Clinical Director of Women's Health at Peninsula Health.

"Whilst most women recover well, a small proportion will have long-standing problems with weakness of the anal sphincter, which can result in incontinence, and have a significant impact on their quality of life."

The research is part of the Victorian Obstetric Anal Sphincter Injury Quality of Care Improvement Project, which is being co-ordinated through Monash Partners Academic Health Sciences Centre, in which Peninsula Health is an active partner.

Lead researcher Dr Oliver Daly and research co-ordinator from each participating health service.

and Associate Midwifery Unit Manager and Perinatal Data coordinator, Roshanee Perera.

"The research looks at the safety and quality infrastructure of the hospital and all of our governance processes," says Jolyon.

"Clinical staff are filling in questionnaires about the culture of the Women's Health Unit, and how they manage the birth itself."

"We are looking at a cohort of women who come through the antenatal clinic and surveying them about anal sphincter injury and if they feel well supported. Women who have an anal sphincter injury are being interviewed as well."

The detailed review is also looking at why different health services have varying rates of the injury occurring.

"There is a huge range of injury rates from one service to another, so we are asking if there a difference in the patient demographic, is it the protocols or is it the training? There is a variety of different aspects," says Jolyon. "At Peninsula Health our rate is well below the state average, so we feel we have a lot to contribute to the study."

Dr Ford says it is important for Peninsula Health to collaborate with other health services when it comes to best practice and to share knowledge.

"We stand to learn from the outcomes of the study, which may result in some improvements in our own practice to further reduce the rate," says Jolyon.

"It's in everybody's best interest to firstly minimise it and secondly to treat it as effectively as possible if it does occur."





vessels in reconstructive flaps before and during surgery

The Plastic Surgery team at Peninsula Health is breaking new ground in reconstructive and trauma surgery, after more than a decade of dedicated and innovative research to improve the patient and surgeon experience.

"Due to some of the significant successes we have enjoyed, we can now plan operations before we undertake them, so that it's safer surgery, it's quicker surgery and it's less stress for the surgeon intra-operatively," says Professor Warren Rozen, Plastic and Reconstructive Surgeon at Peninsula Health.

The team is now working on bringing augmented reality into the operating room.

"The use of augmented reality is absolutely hot off the press," says Warren. "Dr Ratchna Ram is starting a PhD with us and she is going to be taking this technology we've developed into the augmented and virtual reality sphere."

"We're going to be able to use augmented reality to look at the scan data projected onto the patient," he adds. "This will be 3D-guided surgery."

The introduction of 3D printing has enabled Professor Rozen, Associate Professor David Hunter-Smith and the research team to learn even more about the blood vessels.

"Dr Michael Chae introduced 3D printing and other 3D software techniques to further help surgeons pre-operatively as part of his PhD," says Warren. "Before surgery, we do a scan using some of the protocol I worked on in my PhD, and now with Dr Chae's research work, we can also do a 3D print of these tiny blood vessels. That allows us to create a template to use intraoperatively for surgeons to use that anatomy."

Another significant advancement made by the plastic surgery team is a project led by Dr Rachael Leung, which has quantitatively described the anatomy of blood vessels.

"Whereas previously we looked for individual anatomy, Dr Leung has actually given us a targeted understanding of the general anatomy of people's blood vessels," explains Warren.

"What Dr Leung is doing, together with student Jessica Paynter, is looking at the vascular anatomy and comparing it to the surrounding muscles and other aspects of surrounding anatomy, so that we can describe this anatomy even further."

Professor Rozen says the collaborative research group at Frankston deserves significant accolades, having progressed so far in the last decade, especially in reconstructive procedures.

"In plastic surgery, we plan our reconstructive flaps on the blood supply to tissues. We need to know what the anatomy of the blood vessels is for each individual person, so we can base our reconstructive flaps on that anatomy."

"In the past, the main operation for breast reconstruction required surgeons to take skin, fat and muscles from the abdominal wall to give it a blood supply," he adds.

"Now that we know what the blood supply is, we can trace smaller vessels and not take the muscle," continues Warren. "So we can now improve the donor site of where we get the tissue from to make a breast, meaning that we can reconstruct the breast to leave women with their rectus abdominus muscles."

Professor Rozen developed imaging technologies to look at these blood vessels as part of his PhD 10 years ago. Since then, the research team at Peninsula Health has made further advances, which include using 3D printing and augmented reality to help surgeons better understand the anatomy of blood vessels in reconstructive flaps before and during surgery.

"For my research, I used CT angiography, manipulated computer software and the scanning protocol so that we were able to see increasingly small blood vessels," explains Warren.

"This was a technology that didn't really exist, and it wasn't used clinically in this setting before. By the end of my PhD, it was introduced internationally and became the mainstay of investigations before surgery."

"These breakthroughs by our current students are all branches of the one project, and we are developing this technology that is making a significant difference to surgeons and patients."

#### **Reconstructive flaps:**

- + One of the most common uses of reconstructive flaps is in breast reconstruction
- + Flaps are also used in cancer reconstruction surgery and to fix traumatic defects

## Going home early no hindrance to a speedy recovery

"Often the thinking is that people will be more active at home compared to when they are in hospital"

There is an increasingly widespread belief that patients recovering from stroke can adequately continue their rehabilitation at home if they are discharged from hospital sooner.

"The assumption is that people are more active at home compared to in hospital. We are investigating whether this assumption is true," says Peninsula Health physiotherapist and Stroke Detours Program clinician, Jenica Parker.

Using a group of 16 participants with a median age of 69, Jenica is investigating whether there is any evidence to support the theory that a home environment is equally as effective as an inpatient rehabilitation environment in stroke recovery.

Peninsula Health's Stroke Detours Program is a home-based high intensity early supported discharge program for people who have suffered a stroke. The program focuses on changing a patient's rehabilitation environment from an inpatient setting to their own home, while still being visited by a clinician to aid their progress. These patients leave the hospital at least a week earlier than has traditionally been the case.

"There is a lot of research to say that stroke survivors are not very active in a hospital environment compared to healthier people."

Each participant wore the activity tracker for a month, which gave Jenica access to a large amount of data.

"We found that the participants who went into the Stroke Detours Program on discharge were more physically active in hospital and they continued to be more physically active at home."

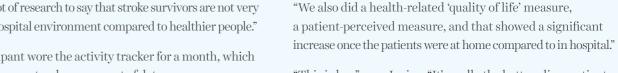
"We also found that going home doesn't reduce physical activity," adds Jenica.

"People continue to be

so there is no negative"

physically active at home,

With research evidence and data now on the side of innovation in swapping the hospital environment for home, the approach to stroke rehabilitation is beginning to change.



"This is key," says Jenica. "It's really the bottom line, patient satisfaction, in terms of person-centred care. Going home early is not detrimental to someone's recovery, you can continue to recover and be physically active at home, whether you live with someone, or alone."





# Explaining the missing dementia link

"We know that both dementia and type 2 diabetes are associated with inflammation"



#### Important research for the Frankston Mornington Peninsula community:

- + The Frankston Mornington Peninsula has a large proportion of people aged over 65 who are at an increased risk of developing dementia later in life
- + The area also has a large number of people who are overweight, obese, or have type 2 diabetes

Having type 2 diabetes roughly doubles the chance of a person developing dementia, but the exact reason behind this fact is still unknown.

"We know that both dementia and type 2 diabetes are associated with inflammation," explains Geriatrician and Senior Research Fellow, Dr Chris Moran.

"It's been well established that diabetes is associated with inflammation in many parts of the body, but in general the brain has not been examined as much."

Dr Moran is currently leading a new research project at Peninsula Health, to examine whether type 2 diabetes is associated with neuro-inflammation and to explore whether that neuro-inflammation is associated with cognitive function.

"What we want to look at in humans, is whether diabetes is associated with inflammation in the brain, and is that linked with someone's cognition?" he says.

"Hopefully if we know that, and we know diabetes is associated with neuro-inflammation, that gives us a target to aim for – so we can work out what to do to reduce the risk of people with type 2 diabetes developing dementia, or ideally remove that risk completely."

Dr Moran and the team are recruiting a unique participant group for the study from the Diabetes Outpatient Clinics at Frankston Hospital.

"We're looking for people who have type 2 diabetes, but we're looking to also recruit their partners because we want to try and control for things like lifestyle, diet and level of education," says Chris.

"We are hoping to find participants who are similar in as many ways as possible and are only different in one thing – having diabetes." "The fewer differences there are between the participants, the more likely we are to isolate the signal of diabetes."

Participants will complete basic questionnaires, a cognitive test, blood tests of inflammation and have brain scans to measure inflammation.

The study aims to recruit 30 couples to take part in the research over the next two years.

The Professorial Academic Unit is based in the Department of Medicine, Frankston Hospital. Its staff also hold conjoint appointments within the Peninsula Clinical School, Monash University.



Evidence
based learning
improves outcomes
in hip fracture

"The Registry provides accurate feedback to local clinicians, which in turn directs local efforts to improve patient care and outcomes"

Peninsula Health serves an ageing population with a considerable number of patients presenting to our hospitals after a hip fracture. The health service sees approximately 300 patients with hip fractures each year, which generally occur in elderly, frail and vulnerable people, with the majority of those being women. Mr Nigel Broughton is Head of Orthopaedic Research at Peninsula Health.

"A hip fracture can be a life-changing event for many people, and often the care provided does not deliver successful outcomes," explains Nigel. "Indeed, some people do not survive and a significant number do not go back to independent living."

The successful management of such patients requires significant input by many disciplines within Peninsula Health. The introduction of the Australia & New Zealand Hip Fracture Registry in 2012 provided a great opportunity for the health service to get involved in some research to help drive improvements in the care provided for patients with a hip fracture to ensure better outcomes.

"Right from the start, I could see that this project would enable us to have a direct effect on care and improve outcomes," says Nigel. "The registry provides accurate feedback to local clinicians, which in turn directs local efforts to improve patient care and outcomes."

"Collaboration in such research is very important, both within our health service and with other institutions," adds Nigel. "This registry is a project which requires input from our surgeons, geriatricians and nursing staff, but the management of these patients requires work from many different teams within the hospital."

There are a large number of disciplines which look after patients with hip fractures, as they navigate the acute and sub-acute hospital system as well as the subsequent rehabilitation areas. This extends from an emergency department presentation, to anaesthetists, nursing teams, theatre and ward teams, physiotherapists, dieticians, occupational therapists and even beyond, when patients go back into the community under the care of general practitioners and community-based services.

"As we are benchmarked against other hospitals, this is a great way to identify what we do well and where we can improve," explains Nigel. "Peninsula Health performs well compared to other contributing institutions."

One of the major improvements to develop from the registry's data is the attention now placed on secondary prevention interventions. When appropriate, patients are now started on treatment for osteoporosis, so they are less likely to come back with other fractures of the wrist, vertebrae or the other hip.

Despite the success of the registry, there are still significant barriers to the use of best available evidence, such as engagement with clinicians and disseminating the message in an efficient, timely and accurate manner. "Translating research findings into a change in practice which can lead to better outcomes is a huge topic and this is a great way to do it," says Nigel. "We have engaged multiple stakeholders in collecting the data, we distribute our results to a large number of disciplines and both these promote the problem, encourage improvement and give some real facts for clinicians to study and look at how changes in practice can lead to better outcomes."



- + The registry involves all hospitals in Australia and New Zealand that manage patients with hip fractures
- + 56 hospitals contributed data to the registry in 2017, up from 32 the previous year, including the first two private hospitals
- + There are now over 20,000 datasets in the registry
- + The ANZHFR is a bi-national audit of hip fracture care and secondary fracture prevention in Australia and New Zealand
- + It uses patient-level and facility-level data to enable improvements to hip fracture care across both countries

Image top: Dr Chris Stokes, patient Helen Baum, Dr Eli Haddad, Dr Angel Hui-Ching Lee, Dr Anjali Khushu
Image bottom: Mr Nigel Broughton



"With research you can add to the body of literature and affect change at a much greater level"

## The SPeED program at The Mornington Centre:

+ Is the first of its kind in Australia

**Leading the** 

- + Offers a greater intensity and responsiveness of allied health interventions such as physiotherapy and occupational therapy
- + Works with the individual and family to make the discharge process and the transition from inpatient to outpatient services as smooth as possible
- + Delivers a significant reduction in the number of days older adult patients need to stay in hospital
- + Has achieved and maintained shorter lengths of stay than historically matched inpatients
- + Helps patients get home quicker and achieve better functional improvement
- + Means patients are less likely to be re-admitted to hospital in the short term

Peninsula Health has broadened its research portfolio in rehabilitation, with the appointment of David Snowdon to a newly established position of Allied Health Research Lead in Sub-Acute.

David started his new role in 2018 and is already working hard to deliver significant results for the local community. David's role is not only to initiate his own investigative work, but also to foster and encourage research projects across the sub-acute areas at Frankston, Mornington, Hastings and Rosebud.

#### Facilitating research across the health service

"My role is to help clinicians conduct research but also translate it into practice," explains David. "So if clinicians want to change their practice in a certain area or if they have found some evidence they would like to explore further, I can help to facilitate that work."

"The best research ideas come from the clinicians themselves, so that will be something I will help to establish, depending on where they think the gaps are and where improvements can be made."

Initiatives like the SPeED (Supporting Patient-Centred Early Discharge) program at The Mornington Centre illustrate that Peninsula Health is keen to innovate in sub-acute care and is looking at ways to translate successful research into clinical practice for local people.

#### "The best research ideas come from the clinicians themselves"

"There are a lot of innovative clinicians here at Peninsula Health," adds David. "That is what you need for research to be successful." As an experienced physiotherapist, David is enthusiastic about his dual role as a clinician and researcher.

"I practiced physiotherapy for seven years before I took the jump into research, but I still work in inpatient rehabilitation, at weekends."

"One of the frustrations you have as a physio is, treating just one patient at a time, your immediate caseload, but with research you can add to the body of literature," enthuses David. "That work can affect a large body of patients, not just here, but nationally and internationally as well."

#### Creating knowledge

"It's a different type of challenge from the clinical experience, as you are trying to create knowledge, which is really challenging but exciting as well, and I enjoy that type of intellectual stimulation."

Peninsula Health's population is growing, and forecasted to increase by 10% over the next decade, alongside the existing spread of demographics and socio-economic challenges.

"This is a great opportunity to be able to explore ways to address the growing population and how we look after older adults," says David. "How do we close the gap to deliver healthcare with equity to all, including those from lower socio-economic backgrounds?"

"The population in this area is, on average, older than the rest of Victoria, so when you have a catchment of people who are older it gives you a chance to set the template for what the rest of Australia might achieve in the future."

"That's quite exciting. If we can find ways to improve the care we deliver and make it more efficient, then it should help to guide practice not just here, but also around the world and lead the way."

## Aiding the elderly in recovering from cancer

"We are developing an individualised survivorship care program for each patient, with the aim of helping them regain pre-treatment levels of functionality in both physical and psychosocial terms," explains Dr Wong

The Oncology team at Peninsula Health is investigating new ways of helping elderly cancer survivors recover from treatment and restore their quality of life.

"At least one in three people on the Frankston and Mornington Peninsula will develop cancer by the age of 75," says Dr Zee Wan Wong, Head of Oncology at Peninsula Health.

"The region is also home to one of the highest concentrations of people aged 70 and over in Australia, so this project is particularly important and relevant for our community."

The 12-month Geriatric Oncology Survivorship program began in late May 2018 and includes patients from the Frankston Hospital Chemotherapy Day Unit, outpatient clinics and from practitioners around the region.

"We are developing an individualised survivorship care program for each patient, with the aim of helping them regain pre-treatment levels of functionality in both physical and psychosocial terms," explains Zee Wan.

Patients are seen by Dr Anjali Khushu, Head of Geriatric Medicine at Peninsula Health, to determine whether they need to be referred to a psychologist, physiotherapist or another allied health discipline.

"Patients who join the study are referred to the Peninsula Health Cancer Rehabilitation Program through our Community Health services," explains Zee Wan. "This enables us to target patients who are most vulnerable and will likely derive the most benefit from the interventions."

Dr Wong says while there is ongoing support for younger people recovering from cancer, for elderly cancer survivors, it is a relative area of unmet need.

"Older people generally have more co-morbidity that can affect

their rates of recovery from cancer treatments compared to

younger patients," she explains. "They may be more socially

isolated and may have issues with their mobility,

carers and nutrition."

This project is funded by the Victorian Cancer Survivorship Program Phase II grant, the pilot program is being run collaboratively between Peninsula Health Oncology and Geriatric Units, Community Health and GP Liaison, together

and information.

At the end of the 12 months, Dr Wong and the team will assess

patients back to their GPs for follow-up care using the new data

what impact these interventions have had and transition

with the Southern Melbourne Integrated Cancer Service and South Eastern Melbourne Primary Health Network.







## Research Governance

## Members of Research Committees during 2017/18

#### **Research Advisory Committee**

The Research Advisory Committee has been established to provide a forum for discussion between the key stakeholders in the research framework at Peninsula Health to provide advice on research activity and development, research governance and enhancing the organisational research profile.

Dr Alison Dwyer (Chair) from October 2017

Professor Kenneth Thomson from October 2017

Dr Nathan Pinskier to August 2017

Ms Peta Murphy to April 2018

Professor John Botha

Mr Nigel Broughton

Ms Lee-Anne Clavarino

**Professor Terry Haines** 

Associate Professor Virginia Plummer

Professor Velandai Srikanth

Dr Tim Williams

Dr Cylie Williams

Ms Elizabeth Wilson

#### **Scientific Advisory Subcommittee**

Professor John Botha (Chair)

Dr Nadine Andrew

Mr Nigel Broughton

Associate Professor Ernie Butler

Associate Professor Miodrag Dodic

Dr Sam Leong

Dr Chris Moran

Associate Professor Virginia Plummer

Dr Wei Wang

Dr Cylie Williams

#### **Human Research Ethics Committee**

From July 2017 the Low Risk Research Subcommittee was absorbed into the Human Research Ethics Committee.

All members were retained allowing many HREC members to attend every second meeting. The Human Research Ethics Committee (HREC) reports to the Board of Directors through the Research Advisory Committee. The role of the HREC is to:

- + Ensure that the design and conduct of any human research that it reviews within the scope of its responsibilities conforms with the National Statement on Ethical Conduct in Human Research (NHMRC, ARC, UA, 2007) (National Statement) and other relevant national codes of human research ethics and also with the ethical standards to which Peninsula Health is committed.
- + Ensure that participants in any human research that the HREC reviews and approves are accorded the respect and protection that is due to them.
- + Facilitate and foster human research that is of benefit to Australian communities.
- + Ensure that any decision it makes complies with relevant Victorian and Australian laws.

Associate Professor Virginia Plummer (Co-Chair)

Dr Cylie Williams (Co-Chair)

Dr Tim Williams (Executive Sponsor)

Professor John Botha

Mr Nigel Broughton

Dr Michael Chae

Mr Sean Chinnathumby

Ms Jan deClifford

Ms Joanna Green

Dr Dilinie Herbert

Ms Alice Irving

Mr Richard Ivice

Ms Alison Lunt

Dr Ian Munro

Dr Meghan O'Brien

Mr Peter Raphael

Professor Warren Rozen

Professor Ravi Tiruvoipati

Mr Michael Wang

Ms Alexis Ward

Dr Ashley Webb

Ms Sharon White



A prospective multisite observational audit of pressure support ventilation in mechanically ventilated patients admitted to the Intensive Care Unit

A retrospective analysis of medications prescribed to patients with heart failure at Frankston Hospital

A retrospective analysis of outcomes following tongue tie repair at Peninsula Health

Acronym use in discharge summaries

Administration of chemotherapy and/or radiotherapy within 30 days of death in oncology patients in Frankston Hospital: A 5 year audit

An audit of the prevalence of drug-related problems and appropriateness of direct oral anticoagulants in a metropolitan hospital

An audit of utilisation of best medical therapy following infrainguinal bypass

Antiplatelet/anticoagulant and prophylactic proton pump inhibitor use in elderly inpatients with upper gastrointestinal bleeding

Are transoesphageal echocardiograms always indicated in patients with bacteraemia?

Audit of antipsychotic use in the management of dementia in a psychogeriatric nursing homes. What is being prescribed, how well is it tolerated and are we objectively monitoring for efficacy and adverse effects?

Characteristics and outcomes of personal emergency response system users admitted to hospital

Characteristics of organisms causing infective endocarditis in a tertiary hospital

Clinical audit of spinal infections at Peninsula Health from 2012 to 2016

Code Blue audit

Comparison of outcomes with nurse practitioner-led vs ICU registrar-led MET calls

Consumer satisfaction survey for Paediatric Diabetes Clinic

Determinants of antimicrobial use and de-escalation in critical care

Determining the level of patient satisfaction with the information provided and their engagement in medication related decision-making: Stage 2

Developing ambulatory care services for women at Peninsula Health

Effect of IPOS renal tool on patients undergoing haemodialysis, in improving barriers to symptom burden and management

Endorsed Prescriber Podiatrist (S4 Medications) mentoring program

ENT caseload in the Emergency Department: 5 year review

Evaluation recall of the Peninsula Health "Stop before the op" brochure

Factors contributing to readmissions to acute care from subacute care

Factors influencing door to needle time in thrombolysis for patients with ischaemic stroke at Frankston Hospital

Following forceps delivery at Frankston Hospital, what proportion of women received physiotherapy, and what was involved in their follow-up? A retrospective audit of forceps deliveries from April 2017-April 2018

Follow-up of infants born to mothers who have tested positive for hepatitis C

Fracture clinic data analysis

Frequency of blood sugar monitoring in inpatients that are prescribed steroids and the impact on patient outcomes

Identification and management of the deteriorating adult patient

Imaging before transfer in the management of infant bile-stained vomiting

Impact of Eyeconnect technology on treatment of eye disease at Frankston Hospital Emergency Department

Implementing an electronic requisition system at a metropolitan hospital to improve accuracy of medication supply and technician delivery times: IMPRESTO Study

Improvement of diabetic outcomes in the young adult population with type 1 diabetes through use of continuous glucose monitoring

Improving multidisciplinary meetings in geriatric evaluation and management units

Improving the identification and management of severe sepsis

Inpatient cardiology consultations: A 3 month clinical assessment at Frankston Hospital

Integrating evidence-based dentistry within a public dental program for children

Junior doctors' experience, knowledge and confidence in dealing with patients with delirium-related agitation in the general hospital setting

Management of paediatric diabetes study

Non-invasive ventilation for patients with asthma

Optimal duration of monitoring for infants at risk of Neonatal Abstinence Syndrome

Outcomes for surgical repair of distal biceps tendon ruptures: A retrospective cohort of 49 cases

Pharyngoesophageal foreign bodies

Postoperative complications in intercondylar humeral fractures managed with olecranon osteotomy

Predicting optimal service boundaries in the transfer and treatment of patients with STEMI

Prevalence of antipsychotics and sedative use in delirium

Radiological staging in early breast cancer: Are we overservicing?

Rates of bacteraemia in neonates treated for early onset sensis

Sodium Glucose Transporter 2 Inhibitor (SGLT2i) associated diabetic ketoacidosis

The accuracy of Medview Medicine Workspace and its impact on time to conduct a best possible medication history

The efficacy of the Vancouver classification in treatment of periprosthetic fractures

The outcome of patients with severe and severe-complicated Clostridium difficile infection treated with early tigecycline combination therapy: A retrospective observational study

The use of non-invasive ventilation in ICU

Thyroid cytopathology reporting in a tertiary hospital

Training led by prescribing pharmacists improves junior doctor's discharge prescription quality and efficiency

Use of Supportive Care Screening Tool for patients with cancer

Walk outcomes audit for patients with stroke discharged from Peninsula Health subacute inpatient wards

# Projects reviewed and approved by the Human Research Ethics Committee

#### Low Risk

A practice survey of airway management in Australian and New Zealand intensive care units and emergency departments PI: Dr Ashwin Subramaniam

Community care program evaluation

PI: Dr Cylie Williams

Frankston Mornington Peninsula Opioid Substitution Treatment Pilot evaluation

PI: Ms Kirsty Morgan

ICU preceptorship survey

PI: Mr Andrew Macey

Investigation of decision-making in airway management — follow up survey

PI: Dr Stuart Marshall

Is sleep quality in older patients associated with better participation in rehabilitation in an aged care ward?

PI: Professor Velandai Srikanth

Maintenance of deprescription of proton pump inhibitors: A pilot study

PI: Professor Velandai Srikanth

Setting research priorities in Allied Health and Community Health

PI: Dr Cylie Williams

Surgeon league tables questionnaire: Do Australian surgeons think surgeons' league tables will ensure surgical quality and standards?

PI: Mr Theo Partsalis

Venous thromboembolism following surgery for cancer PI: Dr Kay Htun

#### More than Low Risk

Pacer Plus evaluation project

PI: Ms Kirsty Morgan

Ultrarapid iron polymaltose infusion for iron deficiency anaemia: A pilot safety study

PI: Mr Iouri Banakh

Evaluation of 'YouRPath' Program: A multi-sectoral early intervention project to reduce AOD risk factors

PI: Ms Kirsty Morgan

ANCHOR and 5-step evaluation project

PI: Ms Lisa Abbott

Massage and Maternal Anxiety (MAMA) pilot study: The feasibility of partner-delivered massage for maternal mental health during pregnancy

PI: Dr Helen Hall

Neuroinflammation, type 2 diabetes and cognition PI: Dr Chris Moran

The Peninsula Health Mental Health Service evaluation of the Model of Care service redesign

PI: Ms Sharon Sherwood

Anticholinergic effects of bronchial thermoplasty
PI: Associate Professor David Langton

Accuracy of transcutaneous bilirubinometry after phototherapy on exposed and unexposed sites in term and near-term infants

PI: Dr Kathy McMahon





A phase 3 randomised, double-blind, multicentre study of adjuvant nivolumab versus placebo in subjects with high risk invasive urothelial carcinoma (CheckMate 274: CHECKpoint pathway and nivoluMAb clinical trial evaluation 274)

#### PI: Dr Emma Beardsley

A phase 2/3, randomised, multicentre study of MOR00208 with bendamustine versus rituximab with bendamustine in patients with Relapsed or Refractory Diffuse Large B-Cell Lymphoma (R-R DLBCL) who are not eligible for High-Dose Chemotherapy (HDC) and Autologous Stem-Cell Transplantation (ASCT)

#### PI: Dr Patricia Walker

A phase 3, randomised, double-blind study to evaluate pembrolizumab plus chemotherapy vs placebo plus chemotherapy as neoadjuvant therapy and pembrolizumab vs placebo as adjuvant therapy for Triple Negative Breast Cancer (TNBC)

#### PI: Dr Jacquelyn Thomson

A randomised phase 3 study of the combination of pembrolizumab (MK-3475) plus epacadostat (INCB024360) alone or with platinum-based chemotherapy versus pembrolizumab plus platinum-based chemotherapy plus placebo as first-line treatment in patients with metastatic non-small cell lung cancer

#### PI: Dr Nicole Potasz

A stage 1, prospective, randomised, placebo-controlled, double-blind study to evaluate the safety and efficacy of Alpha 1-Proteinase Inhibitor (A1PI) augmentation therapy in subjects with A1PI Deficiency and Chronic Obstructive Pulmonary Disease (COPD)

#### PI: Associate Professor David Langton

Alcohol Treatment Centre study
PI: Ms Belinda Berry

Allied Health IMPACT study: Investigating the impact of Models of Practice for Allied Health Care in subacute PI: Dr Cylie Williams

### ANZTCR: Australian & New Zealand Thyroid Cancer Registry PI: Professor Jonathan Serpell

Australia and New Zealand cardiac arrest outcome determinants, and ECMO suitability study

Pl: Dr Sachin Gupta

Building the evidence base of Prevention And Recovery Care Services (PARCS): A study of recovery-oriented outcomes

#### PI: Associate Professor Richard Newton

Decision-making in airway management — design and evaluation of an airway equipment cart

#### PI: Dr Stuart Marshall

Development of a suite of individualised patient information tools (SIPI)

#### PI: Associate Professor David Langton

Diabetes management: a model of shared responsibility between general practitioners, practice nurses and oral health professionals in community health services

#### PI: Professor Hanny Calache

Implementing mainstreaming of genetic testing of women with ovarian cancer: Evaluation of a training program for oncology health professionals

#### PI: Dr Yoland Antill

Evaluation of knowledge gaps around severe adverse drug reactions in healthcare providers

#### PI: Dr Peter Kelley

Expanded analysis of Victorian Cardiac Outcomes Registry
PI: Professor Jamie Layland

Fractional flow reserve versus Angiography for Multivessel Evaluation (FAME) 3 trial: A comparison of fractional flow reserve-guided percutaneous coronary intervention and coronary artery bypass graft surgery in patients with multivessel coronary artery disease

#### PI: Professor Jamie Layland

Improving success rates of direct cardioversion for atrial fibrillation in patients with an elevated body mass index:
A randomised controlled trial of adhesive patches vs hand-held paddles (DCR-BMI)

#### PI: Dr Aleksandr Voskoboinik

Information and support gaps found in treatment for patients with prostate cancer

#### PI: Mr Paul Gilmore

Investigating practices relating to supportive care screening in Victorian cancer services

#### PI: Ms Judy Reilly

Knowledge translation interventions: Which are most effective in upper limb rehabilitation?

#### PI: Ms Catherine Devanny

ReCHARGE - an online multimodal self-management program evaluating the impact of 12 weeks participation on cancer-related fatigue as measured by change in fatigue score from baseline to 12 weeks

#### PI: Dr Patricia Walker

Pilot of a Lung Cancer Clinical Quality Registry
PI: Associate Professor David Langton

Pressure injury prediction in the intensive care unit PI: Mr Cameron Green

Proximity and effect: Optimising outcomes for Psychiatric Assessment and Planning Units (PAPU): An evaluation of the effectiveness of locating PAPUs in close proximity to emergency departments or associated short stay units

#### PI: Associate Professor Richard Newton

Randomised, controlled, single blinded, prospective, multicentre study evaluating the effect of a multi-therapy trial system on neurostimulation trial outcomes

#### PI: Dr Murray Taverner

A pilot study for a multicentre double-blind placebo controlled randomised phase 4 study of the effect of ketamine on the development of chronic post-surgical pain in patients undergoing elective abdominal or non-cardiac thoracic surgery under general anaesthesia PI: Dr Ashley Webb

SIQ — A multicentre survey of the sources of health information used by surrogate decision makers of patients admitted to the intensive care unit

#### PI: Professor Ravindranath Tiruvoipati

Student-initiated conversations around clinical practices with workplace supervisors

#### PI: Dr Cylie Williams

Telephone or Electronic Nutrition Delivery (TEND) to patients with upper GI cancer: A randomised controlled trial PI: Dr Cylie Williams

The burden of shoulder pain in younger people presenting to orthopaedic outpatient clinics

#### PI: Mr Nigel Broughton

The success of research implementation strategies on evidence-based decision-making by allied health managers: A randomised controlled trial

#### PI: Dr Cylie Williams

Towards integrated care: Improving patient and frontline staff engagement and experience of ambulatory care referral and communication processes

#### PI: Mr David Hutcheson

Understanding the lower limb strength profile of children with an idiopathic toe walking gait: A case control study

#### PI: Mr Antoni Caserta

Upper GI Cancer Registry

#### PI: Mr Peter Evans

Victorian Obstetric Anal Sphincter Injury Quality of Care Improvement Project: Improving incidence, management and outcome reporting in perinatal data collections

#### PI: Dr Jolyon Ford

## **Research Findings**

#### **Publications**

Adams, H., Paratz, E., Somaratne, J., Layland, J., Burns, A., Palmer, S., . . . Whitbourn, R. (2018). Different patients, different outcomes: A case-control study of spontaneous coronary artery dissection versus acute coronary syndrome. *Journal of Interventional Cardiology*, 31(1), 41-47. doi:10.1111/joic.12447

Ahmadi, I., Herle, P., Miller, G., Hunter-Smith, D. J., Leong, J., & Rozen, W. M. (2017). End-to-end versus end-to-side microvascular anastomosis: A meta-analysis of free flap outcomes. *Journal of Reconstructive Microsurgery, 33*(6), 402-411. doi:10.1055/s-0037-1599099

Andrew, N. E., Busingye, D., Lannin, N. A., Kilkenny, M. F., & Cadilhac, D. A. (2018). The quality of discharge care planning in acute stroke care: influencing factors and association with postdischarge outcomes. *Journal of Stroke and Cerebrovascular Diseases*, *27*(3), 583-590.

doi:10.1016/j.jstrokecerebrovasdis.2017.09.043

Andrew, N. E., Kim, J., Thrift, A. G., Kilkenny, M. F., Lannin, N. A., Anderson, C. S., . . . Cadilhac, D. A. (2018). Prescription of antihypertensive medication at discharge influences survival following stroke. *Neurology*, *90*(9), e745-e753. doi:10.1212/wnl.00000000000000003

Andrew, N. E., & Srikanth, V. (2018). Sex differences in stroke outcomes: A case for better health care for older women. *Neurology*, 90(22), 995-996. doi:10.1212/wnl.0000000000005591

Banakh, I., Lam, A., & Turek, M. (2017). Iron polymaltose safety research. *Journal of Pharmacy Practice Research, 47*(4), 320-321. doi:10.1002/jppr.1308

Banwell, H. A., Paris, M. E., Mackintosh, S., & Williams, C. M. (2018). Paediatric flexible flat foot: How are we measuring it and are we getting it right? A systematic review. *Journal of Foot and Ankle Research*, 11, 21. doi:10.1186/s13047-018-0264-3

Beauchet, O., Blumen, H. M., Callisaya, M. L., De Cock, A.-M., Kressig, R. W., Srikanth, V., . . . Allali, G. (2018). Spatiotemporal gait characteristics associated with cognitive impairment: A multicenter cross-sectional study, the Intercontinental "Gait, cOgnitiOn & Decline" Initiative. *Current Alzheimer Research*, 15(3), 273-282. doi:10.2174/1567205014666170725125621

Ben-Avraham, D., Karasik, D., Verghese, J., Lunetta, K. L., Smith, J. A., Eicher, J. D., . . . Srikanth, V., . . . Atzmon, G. (2017). The complex genetics of gait speed: Genome-wide meta-analysis approach. *Aging (Albany NY)*, 9(1), 209-246. doi:10.18632/aging.101151

Bishop, E. J., Tiruvoipati, R., Metcalfe, J., Marshall, C., Botha, J., & Kelley, P. G. (2018). The outcome of patients with severe and severe-complicated Clostridium difficile infection treated with tigecycline combination therapy: A retrospective observational study. *Internal Medicine Journal, 48*(6), 651-660. doi:10.1111/imj.13742

Botha, J., Green, C., Carney, I., Haji, K., Gupta, S., & Tiruvoipati, R. (2018). Proportional assist ventilation versus pressure support in patients suitable for weaning from mechanical ventilation: A pilot randomised controlled trial. *Critical Care and Resuscitation*, 20(1), 33-40.

Bright, S., Walsh, K., & Williams, C. (2018). Point prevalence and patterns of mental health comorbidity among people accessing Australia's first older adult–specific alcohol and other drug treatment service. *Journal of Dual Diagnosis, 14*(1), 70-75. doi:10.1080/15504263.2017.1380247

Bright, S. J., & Williams, C. M. (2017). Evaluation of Australia's first older adult-specific early intervention for reducing alcohol-related harm. *Australian Health Review*. doi:10.1071/ah17013

Cabalag, M. S., Chae, M. P., Miller, G. S., Rozen, W. M., & Hunter-Smith, D. J. (2017). Use of three-dimensional printed 'haptic' models for preoperative planning in an Australian plastic surgery unit. *ANZ Journal of Surgery*, *87*(12), 1057-1059. doi:10.1111/ans.13168

Cadilhac, D. A., Andrew, N. E., Kilkenny, M. F., Hill, K., Grabsch, B., Lannin, N. A., . . . Grimley, R. (2018). Improving quality and outcomes of stroke care in hospitals: Protocol and statistical analysis plan for the Stroke123 implementation study. *International Journal of Stroke, 13*(1), 96-106. doi:10.1177/1747493017730741

Cadilhac, D. A., Andrew, N. E., Stroil Salama, E., Hill, K., Middleton, S., Horton, E., . . . Grimley, R. (2017). Improving discharge care: The potential of a new organisational intervention to improve discharge after hospitalisation for acute stroke, a controlled before-after pilot study. *BMJ Open, 7*(8), e016010. doi:10.1136/bmjopen-2017-016010

Cadilhac, D. A., Busingye, D., Li, J. C., Andrew, N. E., Kilkenny, M. F., Thrift, A. G., . . . Cameron, J. (2018). Development of an electronic health message system to support recovery after stroke: Inspiring Virtual Enabled Resources following Vascular Events (iVERVE). *Patient Preference and Adherence, 12*, 1213-1224. doi:10.2147/ppa.s154581

Callisaya, M. L., Daly, R. M., Sharman, J. E., Bruce, D., Davis, T. M. E., Greenaway, T., . . . Srikanth, V. K. (2017). Feasibility of a multimodal exercise program on cognition in older adults with type 2 diabetes - a pilot randomised controlled trial. *BMC Geriatrics*, 17(1), 237. doi:10.1186/s12877-017-0635-9

Chae, M. P., Ganhewa, D., Hunter-Smith, D. J., & Rozen, W. M. (2018). Direct augmented reality computed tomographic angiography technique (ARC): An innovation in preoperative imaging. *European Journal of Plastic Surgery, 41*(4), 415-420. doi:10.1007/s00238-018-1395-2

Chae, M. P., Hunter-Smith, D. J., Rostek, M., Smith, J. A., & Rozen, W. M. (2018). Enhanced preoperative deep inferior epigastric artery perforator flap planning with a 3D-printed perforasome template: Technique and case report. *Plastic and Reconstructive Surgery - Global Open, 6*(1), e1644. doi:10.1097/gox.0000000000001644

Chae, M. P., Rozen, W. M., Patel, N. G., Hunter-Smith, D. J., & Ramakrishnan, V. (2017). Enhancing breast projection in autologous reconstruction using the St Andrew's coning technique and 3D volumetric analysis. *Gland Surgery*, 6(6), 706-714. doi:10.21037/gs.2017.06.01

Chapman, C., Morgan, P., Cadilhac, D. A., Purvis, T., & Andrew, N. E. (2018). Risk factors for the development of chest infections in acute stroke: A systematic review. Topics in Stroke Rehabilitation, 1-14. doi:10.1080/10749357.2018.1481567

Charidimou, A., Karayiannis, C., Song, T. J., Orken, D. N., Thijs, V., Lemmens, R., . . . Srikanth, V., . . . Heo, J. H. (2017). Brain microbleeds, anticoagulation, and hemorrhage risk: Meta-analysis in stroke patients with AF. *Neurology*, 89(23), 2317-2326. doi:10.1212/wnl.000000000004704

Choy, S. W., Yeoh, A. C., Lee, Z. Z., Srikanth, V., & Moran, C. (2017). Melatonin and the prevention and management of delirium: A scoping study. *Frontiers in Medicine (Lausanne)*, 4, 242. doi:10.3389/fmed.2017.00242

Chung, R. D., Hunter-Smith, D. J., Spychal, R. T., Ramakrishnan, V. V., & Rozen, W. M. (2017). A systematic review of intraoperative process mapping in surgery. *Gland Surgery*, *6*(6), 715-725. doi:10.21037/gs.2017.11.02

Cole, J., Beare, R., Phan, T. G., Srikanth, V., MacIsaac, A., Tan, C., ... Tong, D., ... Layland, J. (2017). Staff recall travel time for ST elevation myocardial infarction impacted by traffic congestion and distance: A digitally integrated map software study. *Frontiers in Cardiovascular Medicine, 4*, 89. doi:10.3389/fcvm.2017.00089

de Lange, L., Coyle, E., Todd, H., & Williams, C. (2018). Evidence-based practice guidelines for prescribing home modifications for clients with bariatric care needs. *Australian Occupational Therapy Journal*, 65(2), 107-114. doi:10.1111/1440-1630.12443

Ding, H., Jayasena, R., Maiorana, A., Dowling, A., Chen, S. H., Karunanithi, M., . . . Layland, J., . . . Edwards, I. (2017). Innovative Telemonitoring Enhanced Care Programme for Chronic Heart Failure (ITEC-CHF) to improve guideline compliance and collaborative care: Protocol of a multicentre randomised controlled trial. *BMJ Open, 7*(10). doi:10.1136/bmjopen-2017-017550

Dredge, A., Oates, L., Gregory, H., & King, S. (2017). Effective change management within an Australian community palliative care service. *British Journal of Community Nursing, 22*(11), 536-541. doi:10.12968/bjcn.2017.22.11.536

Evans, M. A., Lim, R., Kim, H. A., Chu, H. X., Gardiner-Mann, C. V., Taylor, K. W. E., . . . Srikanth, V., . . . Broughton, B. R. S. (2018). Acute or delayed systemic administration of human amnion epithelial cells improves outcomes in experimental stroke. *Stroke*, 49(3), 700-709. doi:10.1161/strokeaha.117.019136

Fisher, A., Fisher, L., Srikusalanukul, W., & Smith, P. N. (2018). Bone turnover status: Classification model and clinical implications. *International Journal of Medical Sciences, 15*(4), 323-338. doi:10.7150/ijms.22747

Fisher, A., Fisher, L., Srikusalanukul, W., & Smith, P. N. (2018). Usefulness of simple biomarkers at admission as independent indicators and predictors of in-hospital mortality in older hip fracture patients. *Injury*, 49(4), 829-840. doi:10.1016/j.injury.2018.03.005

Fisher, A., Srikusalanukul, W., Fisher, L., & Smith, P. N. (2017). Lower serum P1NP/betaCTX ratio and hypoalbuminemia are independently associated with osteoporotic nonvertebral fractures in older adults. *Clinical Interventions in Aging, 12,* 1131-1140. doi:10.2147/cia.s141097

Goldblatt, J., Buxey, K., Paul, E., Foot-Connolly, R., Leech, T., & Bell, S. (2018). Study on the time taken for patients to achieve the ability to self-care their new stoma. *ANZ Journal of Surgery*, 88(6), E503-E506. doi:10.1111/ans.14195

Green, C., Baker, T., & Subramaniam, A. (2018). Predictors of respiratory failure in patients with Guillain-Barré syndrome: A systematic review and meta-analysis. *The Medical Journal of Australia*, 208(4), 181-188. doi:10.5694/mja17.00552.

Guo, Y. F., Luo, Y., Lam, L., Cross, W., Plummer, V., & Zhang, J. P. (2018). Burnout and its association with resilience in nurses: A cross-sectional study. *Journal of Clinical Nursing*, *27*(1-2), 441-449. doi:10.1111/jocn.13952

Hampson, J., Green, C., Stewart, J., Armitstead, L., Degan, G., Aubrey, A., . . . Tiruvoipati, R. (2018). Impact of the introduction of an endotracheal tube attachment device on the incidence and severity of oral pressure injuries in the intensive care unit: a retrospective observational study. *BMC Nursing*, 17, 4. doi:10.1186/s12912-018-0274-2

Harkin, F. E., & Large, R. J. (2017). Humeral shaft fractures: Union outcomes in a large cohort. *Journal of Shoulder and Elbow Surgery*, 26(11), 1881-1888. doi:10.1016/j.jse.2017.07.001

Innes, K., Elliott, D., Plummer, V., & Jackson, D. (2018). Emergency department waiting room nurses in practice: An observational study. *Journal of Clinical Nursing*, *27*(7-8), e1402-e1411. doi:10.1111/jocn.14240

Imlach, A.-R., Ward, D. D., Stuart, K. E., Summers, M. J., Valenzuela, M. J., King, A. E., . . . Srikanth, S., . . . Vickers, J. C. (2017). Age is no barrier: Predictors of academic success in older learners. *npj Science of Learning*, *2*(1), 13. doi:10.1038/s41539-017-0014-5

Kaplonyi, J., Bowles, K. A., Nestel, D., Kiegaldie, D., Maloney, S., Haines, T., & Williams, C. (2017). Understanding the impact of simulated patients on health care learners' communication skills: A systematic review. *Medical Education*, *51*(12), 1209-1219. doi:10.1111/medu.13387

Khalil, V., Sajan, C., Tsai, T., & Ma, D. (2018). Antidiabetics' usage in type 2 diabetes mellitus: Are prescribing guidelines adhered to? A single centre study. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews, 12*(5), 635-641. doi:10.1016/j.dsx.2018.04.005

Khan, S., Evans, P., & Fisher, L. (2017). Gastrointestinal: Biliary tubulovillous adenoma. *Journal of Gastroenterology and Hepatology, 32*(8), 1423. doi:10.1111/jgh.13660

Koh, J. Q., Tong, D. C., Sriamareswaran, R., Yeap, A., Yip, B., Wu, S., Parera, P., Menon, S., Noaman, S. A., Layland, J. (2018). In-hospital 'CODE STEMI' improves door-to-balloon time in patients undergoing primary percutaneous coronary intervention. *Emergency Medicine Australasia, 30*(2), 222-227. doi:10.1111/1742-6723.12855

Kumar, S., Dhillon, R., Shah, S., White, D. C., & Rozen, W. M. (2018). Patent Blue dye allergy and the deep inferior epigastric perforator free flap: A unique interaction. *Clinical Case Report*, 6(4), 581-584. doi:10.1002/ccr3.1412

- Langton, D., Sha, J., Ing, A., Fielding, D., Thien, F., & Plummer, V. M. (2017). Bronchial thermoplasty: Activations predict response. *Respiratory Research*, *18*(134), 1-6. doi:10.1186/s12931-017-0617-7
- Langton, D., Wang, W., Thien, F., & Plummer, V. (2018). The acute effects of bronchial thermoplasty on FEV1. *Respiratory Medicine*, *137*, 147-151. doi:10.1016/j.rmed.2018.03.003
- Lau, S., Guest, C., Hall, M., Tacey, M., Joseph, S., & Oppy, A. (2017). Functional outcomes post Lisfranc injury transarticular screws, dorsal bridge plating or combination treatment? *Journal of Orthopaedic Trauma, 31*(8), 447-452. doi:10.1097/bot.000000000000848
- Lau, S. C., Guest, C., Hall, M., Tacey, M., Joseph, S., & Oppy, A. (2017). Do columns or sagittal displacement matter in the assessment and management of Lisfranc fracture dislocation? An alternate approach to classification of the Lisfranc injury. *Injury*, 48(7), 1689-1695. doi:10.1016/j.injury.2017.03.046
- Laws, S. M., Gaskin, S., Woodfield, A., Srikanth, V., Bruce, D., Fraser, P. E., . . . Verdile, G. (2017). Insulin resistance is associated with reductions in specific cognitive domains and increases in CSF tau in cognitively normal adults. *Scientific Reports*, 7(9766), 1-11. doi:10.1038/s41598-017-09577-4
- Lee, D. A., Williams, C., Lalor, A. F., Brown, T., & Haines, T. P. (2018). Hospital readmission risks in older adults following inpatient subacute care: A six-month follow-up study. *Archives of Gerontology and Geriatrics*, 77, 142-149. doi:10.1016/j.archger.2018.05.005
- Lovelock, T. M., & Broughton, N. S. (2018). Follow-up after arthroplasty of the hip and knee: Are we over-servicing or under-caring? *The Bone & Joint Journal, 100-b*(1), 6-10. doi:10.1302/0301-620x.100b1.bjj-2017-0779.r1
- Lovelock, T. M., Broughton, N. S., & Williams, C. M. (2018). The popularity of outcome measures for hip and knee arthroplasties. *The Journal of Arthroplasty, 33*(1), 273-276. doi:10.1016/j.arth.2017.08.024
- Lowe, G., Plummer, V., & Boyd, L. (2018). Nurse practitioner integration: Qualitative experiences of the change management process. *Journal of Nursing Management*. doi:10.1111/jonm.12624
- Luong, E., deClifford, J., Coutsouvelis, J., Lam, S. H., Drysdale, P., Danckert, R., & Campbell, E. (2018). Implementation of standardised oral care treatment and referral guidelines for older sub-acute patients: A multidisciplinary approach. *Journal of Pharmacy Practice and Research*, 48(1), 10-17. doi:10.1002/jppr.1311
- Madhuvu, A. E., Plummer, V., & Morphet, J. (2017). An exploration of participants' experience of an intensive care nursing transition to specialty practice program. *Australian Critical Care, 31*(5), 311-316. doi:10.1016/j.aucc.2017.08.005
- Marshall, N., Ward, E., & Williams, C. M. (2018). The identification and appraisal of assessment tools used to evaluate metatarsus adductus: A systematic review of their measurement properties. *Journal of Foot and Ankle Research, 11*(25), 1-10. doi:10.1186/s13047-018-0268-z
- Marshall, S. D. (2017). Lost in translation? Comparing the effectiveness of electronic-based and paper-based cognitive aids. *British Journal of Anaesthesia, 119*(5), 869-871. doi:10.1093/bja/aex263

- Marshall, S. D., & Serpell, J. (2017). Failed vocalis muscle monitoring during thyroid surgery resulting from residual muscle relaxation. *A & A Practice*, *9*(5), 158. doi:10.1213/xaa.000000000000554
- Melita, V. d. V., Jan, C., & Anne, M. (2018). Staff experience and perceptions of the safety and risks of electronic medication management systems in Victorian public hospitals. *Journal of Pharmacy Practice and Research*, 48(1), 18-25. doi:10.1002/jppr.1327
- Moran, C., Beare, R., Phan, T., Starkstein, S., Bruce, D., Romina, M., & Srikanth, V. (2017). Neuroimaging and its relevance to understanding pathways linking diabetes and cognitive dysfunction. *Journal of Alzheimer's Disease*, *59*(2), 405-419. doi:10.3233/jad-161166
- Ng, R., Broughton, N., & Williams, C. (2018). Measuring recovery after ankle fractures: A systematic review of the psychometric properties of scoring systems. *The Journal of Foot and Ankle Surgery*, *57*(1), 149-154. doi:10.1053/j.jfas.2017.08.009
- Ng, T. T., & Nasserallah, M. (2017). The art of removing nasal foreign bodies. *Open Access Emergency Medicine*, 9, 107-112. doi:10.2147/oaem.s150503
- Palmer, S., Layland, J., Adams, H., Ashokkumar, S., Williams, P. D., Judkins, C., . . . Wilson, A. M. (2018). Measurement of microvascular function in patients presenting with thrombolysis for ST elevation myocardial infarction, and PCI for non-ST elevation myocardial infarction. *Cardiovascular Revascularization Medicine*. doi:10.1016/j.carrev.2018.04.007
- Perotti, O. M., Holwill, S., Sreedharan, S., Reilly, D. J., Rozen, W. M., & Hunter-Smith, D. J. (2018). Plastic and reconstructive surgical research in Australia and New Zealand: A bibliometric analysis. *Australian Journal of Plastic Surgery*, 1(1): 163-168.
- Picone, D. S., Schultz, M. G., Otahal, P., Aakhus, S., Al-Jumaily, A. M., Black, J. A., . . . Srikanth, V., . . . Sharman, J. E. (2017). Accuracy of cuff-measured blood pressure: Systematic reviews and meta-analyses. *Journal of the American College of Cardiology, 70*(5), 572-586. doi:10.1016/j.jacc.2017.05.064
- Plummer, V., Tozer-Jones, J., & Williams, B. (2017). The Bachelor of Nursing/Bachelor of Emergency Health (Paramedic) degree: How well does it align with course objectives? *Australasian Journal of Paramedicine*, 14(4), 2.
- Prabhu, S., Taylor, A. J., Costello, B. T., Kaye, D. M., McLellan, A. J. A., Voskoboinik, A., . . . Kistler, P. M. (2017). Catheter ablation versus medical rate control in atrial fibrillation and systolic dysfunction: The CAMERA-MRI Study. *Journal of the American College of Cardiology, 70*(16), 1949-1961. doi:10.1016/j.jacc.2017.08.041
- Ridley, E. J., Davies, A. R., Parke, R., Bailey, M., McArthur, C., Gillanders, L., . . . McGuinness, S. (2018). Supplemental parenteral nutrition versus usual care in critically ill adults: A pilot randomized controlled study. *Critical Care, 22*(1), 12. doi:10.1186/s13054-018-1939-7
- Robson, K., & Williams, C. M. (2017). Dealing with the death of a long term patient; What is the impact and how do podiatrists cope? *Journal of Foot and Ankle Research, 10,* 36. doi:10.1186/s13047-017-0219-0

- Sarkies, M. N., White, J., Morris, M. E., Taylor, N. F., Williams, C., O'Brien, L., . . . Haines, T. P. (2018). Implementation of evidence-based weekend service recommendations for allied health managers: A cluster randomised controlled trial protocol. *Implementation Science*, 13(1), 60. doi:10.1186/s13012-018-0752-7
- Schnittker, R., Marshall, S., Horberry, T., Young, K., & Lintern, G. (2017). Exploring decision pathways in challenging airway management episodes. *Journal of Cognitive Engineering and Decision Making*, 11(4), 353-370. doi:10.1177/1555343417716843
- Schwerdtle, P., De Clerck, V., & Plummer, V. (2017). Survivors' perceptions of public health messages during an Ebola crisis in Liberia and Sierra Leone: An exploratory study. *Nursing and Health Sciences*, 19(4), 492-497. doi: 10.1111/nhs.12372
- Siejka, T. P., Srikanth, V. K., Hubbard, R. E., Moran, C., Beare, R., Wood, A., . . . Callisaya, M. L. (2018). Frailty and cerebral small vessel disease: A cross-sectional analysis of the Tasmanian Study of Cognition and Gait (TASCOG). *The Journals of Gerontology: Series A, Biological Sciences and Medical Sciences*, 73(2), 255-260. doi:10.1093/gerona/glx145
- Stevens, J., Clement, N., Nasserallah, M., Millar, M., & Joseph, S. (2018). Femoral cortical thickness influences the pattern of proximal femoral periprosthetic fractures with a cemented stem. *European Journal of Orthopaedic Surgery & Traumatology, 28*(4), 659-665. doi:10.1007/s00590-018-2141-y
- Subramaniam, A., Green, C., Omair, M., Soh, L., Yeoh, A. C., & Tiruvoipati, R. (2018). Cost implications of avoidable rapid response call activations in older patients. *The New Zealand Medical Journal*, 131(1472), 38-52.
- Suryanto, S., Plummer, V., & Boyle, M. (2018). Knowledge, attitude, and practice of ambulance nurses in prehospital care in Malang, Indonesia. *Australasian Emergency Nursing Journal*, *21*(1), 8-12. doi:10.1016/j.auec.2017.12.001
- Suryanto, S., Boyle, M., & Plummer, V. (2017). Healthcare workforce in Indonesia. *Asia Pacific Journal of Health Management*, 12(3), 32-40.
- Suryanto, S., Plummer, V. M., & Boyle, M. (2017). Healthcare system in Indonesia. *Hospital Topics*, *95*(4), 82-89. doi:10.1080/00185868.2017.1333806
- Suryanto, S., Boyle, M., & Plummer, V. (2017). The pre-hospital and healthcare system in Malang, Indonesia. *Australasian Journal of Paramedicine*, *14*(2).
- Tang, B., Green, C., Yeoh, A. C., Husain, F., & Subramaniam, A. (2018). Post-operative outcomes in older patients: A single-centre observational study. *ANZ Journal of Surgery, 88*(5), 421-427. doi:10.1111/ans.14433
- Terrens, A. F., Soh, S. E., & Morgan, P. E. (2017). The efficacy and feasibility of aquatic physiotherapy for people with Parkinson's disease: A systematic review. *Disability and Rehabilitation*, 1-10. doi:10.1080/09638288.2017.1362710
- Tibble, H. M., Broughton, N. S., Studdert, D. M., Spittal, M. J., Hill, N., Morris, J. M., & Bismark, M. M. (2018). Why do surgeons receive more complaints than their physician peers? *ANZ Journal of Surgery*, 88(4), 269-273. doi:10.1111/ans.14225
- Tiruvoipati, R., Gupta, S., Pilcher, D., & Bailey, M. (2018). Hypercapnia and hypercapnic acidosis in sepsis: Harmful, beneficial or unclear? *Critical Care and Resuscitation*, 20(2), 94-100.

- Tiruvoipati, R., Pilcher, D., Botha, J., Buscher, H., Simister, R., & Bailey, M. (2018). Association of hypercapnia and hypercapnic acidosis with clinical outcomes in mechanically ventilated patients with cerebral injury. *JAMA Neurology*, *75*(7), 818-826. doi:10.1001/jamaneurol.2018.0123
- Tong, D. C., Whitbourn, R., MacIsaac, A., Wilson, A., Burns, A., Palmer, S., & Layland, J. (2017). High-sensitivity C-reactive protein is a predictor of coronary microvascular dysfunction in patients with ischemic heart disease. *Frontiers in Cardiovascular Medicine*, 4, 81. doi:10.3389/fcvm.2017.00081
- Trakarnwijitr, I., Li, B., Adams, H., Layland, J., Garlick, J., & Wilson, A. (2017). Age modulates the relationship between platelet-to-lymphocyte ratio and coronary artery disease. *International Journal of Cardiology*, 248, 349-354. doi:10.1016/j.ijcard.2017.06.127
- Van de Vreede, M., McGrath, A., & deClifford, J. (2018). Review of medication errors that are new or likely to occur more frequently with electronic medication management systems. *Australian Health Review.* doi:10.1071/ah17119
- White, J., Greer, K., Russell, G., Lalor, A., Stolwyk, R., Williams, C., . . . Haines, T. (2017). Factors affecting services offered to older adults with psychological morbidity: An exploration of health professional attitudes. *Aging & Mental Health*, 1-8. doi:10.1080/13607863.2017.1393797
- Williams, B., Reddy, P., Marshall, S., Beovich, B., & McKarney, L. (2017). Simulation and mental health outcomes: A scoping review. *Advances in Simulation*, *2*(2), 1-8. doi:10.1186/s41077-016-0035-9
- Williams, C., & Dalwood, N. (2018). Patients as 'patients' and 'educators': Harnessing the power and potential of the patient's voice. *Medical Education*, 52(5), 462-464. doi:10.1111/medu.13571
- Woo, S., Walklin, R., Ackermann, T., Lo, S. W., Shilton, H., Pilgrim, C., Evans, P., . . . Croagh, D. (2018). Comparison of endoscopic and percutaneous drainage of symptomatic necrotic collections in acute necrotizing pancreatitis. *Asian Journal of Endoscopic Surgery*. doi:10.1111/ases.12490
- Yuncken, J., Williams, C. M., Stolwyk, R., & Haines, T. P. (2018). People with diabetes foot complications do not recall their foot education: A cohort study. *Journal of Foot and Ankle Research*, 11(12), 1-7. doi:10.1186/s13047-018-0255-4

## **Celebrating Research 2017 Prize Winners**

#### **Presentations**

#### PERSON-CENTRED CARE

#### Dr Nadine Andrew

Manualising goal setting for patient centred discharge care planning following stroke.

Experienced Researcher Category

#### Mr Liam Shaw & Ms Michelle Shanti

Being involved in nursing handover on acute inpatient units: Views of mental health consumers.

Novice Researcher Category

#### POPULATION HEALTH AND INTEGRATED CARE

#### A/Prof Virginia Plummer

Exploring medication adherence among Indians living with chronic diseases who have migrated to Australia. Experienced Researcher Category

#### Dr Lakshana Kannagi Kalatharan

Clinical audit of spinal infections at Peninsula Health from 2012 to 2016.

Novice Researcher Category

#### **INNOVATIVE TECHNOLOGY AND THERAPIES**

#### A/Prof David Langton

Bronchial thermoplasty reduces gas trapping in severe asthmatics.

Experienced Researcher Category

#### Mr Michael Wang

Serum Activin A levels associated with mortality but not physical function in critically ill patients: A prospective observational study.

Novice Researcher Category

#### AGED CARE AND CHRONIC DISEASE MANAGEMENT

#### Dr Chris Moran

Longitudinal associations of antihypertensive agent choice and brain atrophy.

Experienced Researcher Category

#### Dr Ronny Wirawan

The value of serum folate measurement in older people in the subacute setting.

Novice Researcher Category

#### PATIENT SAFETY

#### Mr Iouri Banakh

Perioperative and prescribing pharmacist service: A single centre pilot study.

Experienced Researcher Category

Ω,

#### Dr Cylie Williams

The cognitive dissonance between evidence support and use of strategies for falls prevention in health care students. Experienced Researcher Category

#### Dr William Bonavia

Prediction of delirium among critically ill patients: Validation of the PRE-DELIRIC in an Australian Intensive Care Unit.

Novice Researcher Category

#### **HEALTH SERVICES AND WORKFORCE**

#### Dr Sini Jacob

Views of mental health nurses on overall effectiveness of a training program on involving clients in nursing handover: Pre and post implementation survey results.

Experienced Researcher Category

#### Ms Geordie Vuillermin

Defining Lumbar Extension, Flexion and Rotation in the workforce (FLEXAR).

Novice Researcher Category

#### MEDICAL STUDENT

#### Ms Rachael Leung

Broadening our understanding of the perforasome concept: mapping the angiosomes of deep inferior epigastric artery perforators with computed tomographic angiography. *1st Prize* 

#### Mr Jonathan McCafferty & Mr Matthew Donnan

Characteristics of in-hospital cardiorespiratory arrests at a Metropolitan Australian Hospital.

2nd Prize

#### Mr Daniel Chepurin

Radial head arthroplasty for trauma: Can we improve outcomes? 3rd Prize

#### Posters

#### PERSON-CENTRED CARE

Dr Rumes Sriamareswaran, Dr Manuja Premaratne Impact of cardiology consultation on the management of atrial fibrillation in Peninsula Health patients.

#### INNOVATIVE TECHNOLOGY AND THERAPIES

Ms Lucia Michailidis, Dr Cylie Williams, Dr Shan Bergin, Prof Terry Haines

Low frequency ultrasonic debridement for diabetes-related foot ulcers in the acute hospital, but at what cost?

#### POPULATION HEALTH AND INTEGRATED CARE

#### Dr Lakshana Kalatharan

Clinical audit of spinal infections at Peninsula Health from 2012 to 2016

#### AGED CARE AND CHRONIC DISEASE MANAGEMENT

Dr Elie Haddad , Mr Jouad Haydar, Mr Daniel Chepurin, Ms Anne Hodge, Mr Nigel Broughton

Hip fracture management at Peninsula Health: how do we compare to our colleagues throughout Australia and New Zealand?

#### **PATIENT SAFETY**

Mr Cameron Green, Dr William Bonavia, Dr Candice Toh, Prof Ravi Tiruvoipati

Prediction of delirium among critically ill patients: Validation of the PRE-DELIRIC in an Australian Intensive Care Unit.

Dr Sachin Gupta, Mr Hamish Brown, Mr Jonathan McCafferty, Mr Matthew Donnan, Mr Cameron Green Characteristics of in-hospital cardiorespiratory arrests at a metropolitan Australian hospital.

#### **HEALTH SERVICES AND WORKFORCE**

**Dr Rumes Sriamareswaran, Dr Manuja Premaratne**Inpatient cardiology consultations: A 3 month clinical assessment at Frankston Hospital.

## Awards and Grants

#### **Awards**

Dr Cylie Williams 2018 Dean's Award for Excellence in Research (Early Career Researcher) in the Faculty of Medicine, Nursing and Health Sciences, Monash University

#### **Grants**

Andrew N.E., Kilkenny M.F., Kim J. PRECISE: Evaluation of enhanced models of primary care in the management of stroke and other chronic diseases. NHMRC Project Grant, \$556,183.80

Andrew N.E., Cadilhac D.A., Godecke E., Hersh D.
Developing aphasia friendly materials for standardised
patient centred goal setting in stroke. NHMRC Centre
of Research Excellence, Stroke Rehabilitation and Brain
Recovery Clinical Stipend Grant \$20,000

Bernhardt, J., Donnan G., Churilov L., Langhorne P., Pandian J., Dewey H., Srikanth V., English C., Moodie M., Middleton S. AVERT-DOSE (Determining Optimal early rehabilitation after StrokE): A multi-arm covariate-adjusted, response-adaptive randomised controlled trial. NHMRC, \$4,561,628.90

Moran C. Neuroinflammation, type 2 diabetes and cognition.
Mason Foundation National Medical Program Grant,
\$100,000

Moran C. Neuroinflammation, type 2 diabetes and cognition. Royal Australian College of Physicians Croxon Research Establishment Fellowship for Alzheimer Disease Research, 2017 \$75,000

Moran C. Neuroinflammation, type 2 diabetes and cognition. Monash University, Platform Access Grant, **\$10,000** 

Ng M., Fearon W., Yong A., Keech A., White H., Layland J. Restoring Microcirculatory Perfusion in ST-elevation Myocardial Infarction: The RESTORE MI study. National Health and Medical Research Council (NHMRC) Project Grant, \$3,274,536.74

Srikanth V. Brain Ageing - studying causes and developing interventions. NHMRC Practitioner Fellowship (Metabolic Health and Brain Ageing, 2018-2023), \$485,000

Verghese, J. & Srikanth, V. The biological underpinnings of Motoric Cognitive Risk syndrome: a multi-center study. National Institute on Aging, USA, \$165,000

Williams, C.M. Remote diagnosis of common apophyseal injuries in the lower limb The Australasian Academy of Podiatric Sports Medicine, \$5,000



### Office for Research

(03) 9784 2680 www.peninsulahealth.org.au/research







