



Research

Report 2017



Peninsula
Health

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Peninsula Health acknowledges the contribution made by all staff involved in research. The *Research Report 2017* showcases a small number of these projects but 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.

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Welcome

to the 2017 Peninsula Health Research Report

This year we are sharing stories about areas of our research program which have a direct impact on the health outcomes for residents of Frankston and the Mornington Peninsula.

Our stories focus on a wide body of work across Allied Health, Medicine, Nursing, Surgery, Mental Health and Rehabilitation. Enormous expertise, energy and effort goes into every research project, and the variety of areas represented is indicative of the commitment of our clinical teams to improving health outcomes for the local community.

During the next 18 months, we will be constructing a Research and Education Centre at Frankston Hospital. This \$15 million project will further cement Peninsula Health as a leading teaching and research hospital, and will also strengthen our ties with our collaborator on the project, Monash University.

In this year's Report, you can read more about the Academic Unit's investigation into the link between diabetes and dementia, as well as the innovative use of telemedicine technology in improving outcomes in the rehabilitation of patients with heart failure.

As we continue to grow our research profile across Victoria and Australia, we bid farewell to Associate Professor John Catalano and Professor Henry Ekert AM who have both contributed immensely to the building of research capacity at Peninsula Health. They leave with our enormous thanks and best wishes.

I hope you enjoy reading this year's *Research Report*.

Regards,



Dr Tim Williams
Executive Director,
Medical Services
and Clinical Governance



Research Activity 2016/17

94

Projects
considered
for approval

85

Publications

78

Abstracts
submitted for
Celebrating
Research 2016

33

Multi-site
projects
approved

Message

from the Professor of Medicine



It has been just over a year since I started my role as Professor of Medicine, with the purpose of shaping the research agenda and enhancing research culture across Peninsula Health. There has been substantial progress so far, and there are some exciting times ahead.

With the support of Monash University, we now have a fully-fledged Professorial Academic Unit comprised of researchers with excellent skills in clinical medicine, epidemiology, bioinformatics, biostatistics, and health services research. This core group has begun to make important links with clinical groups across Peninsula Health, with the aim of supporting a higher level of research activity. This has already led to some innovative activities, some of which you will read about in this *Research Report*.

We have put significant effort into refining our research priorities for the future and establishing a platform for large scale activities. Our consultation shows that our research should be focused on the two major issues affecting our population – the first being the high burden of chronic disease. Our aim is to establish research programs that address *chronic disease* across the lifespan, using preventive and treatment approaches, both in community and hospital settings, with a strong focus on social and environmental factors that determine the risk of such diseases.

Farewell

Associate Professor John Catalano has left Peninsula Health after more than a decade of dedicated service and research in Haematology.

He was appointed *Head of Clinical Haematology* at Peninsula Health in 2002, and enjoyed a career of outstanding contribution to clinical practice, teaching and research in Frankston.

Associate Professor Catalano was the *Principal Investigator* for many of the national and international clinical trials at Peninsula Health, which offered local residents the chance to take part in trials of new drugs or new drug combinations to address blood disease.

Associate Professor Catalano has published numerous peer reviewed articles in international journals and also serves on a number of Scientific and Medical Advisory Boards.

We wish him all the best in his retirement.



*Associate Professor
John Catalano*

The second major issue is *health related to ageing*, as the Peninsula has one of the oldest regional populations in Australia. Our approach will be two-fold in this regard – to study the connection between ageing and the risk or effects of chronic disease, and to develop ways to promote positive health in ageing.

We have begun to establish the infrastructure and partnerships to address our research priorities. The planning for our new Research and Education Centre is advancing, with the building scheduled to be ready in mid-2019. It will be the focus point for our research and training activities with world-class facilities and technology. We have strong relationships developing with members of the Monash Partners Academic Health Science Centre, to assist in starting major research programs. The Monash Addiction Research Centre and Monash Rehabilitation Centre at the Peninsula Campus of Monash University also provide us with excellent opportunities to address important health issues in our community.

Congratulations to all those who have contributed to our research-related activities in the past 12 months. 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, and I encourage you all to join this very worthwhile effort.

Regards,



Velandai Srikanth
Professor of Medicine

Professor Henry Ekert AM has retired from his position as the inaugural *Chair of Peninsula Health's Research and Academic Committee*.

The role of the committee is to provide expert advice on all matters relating to research, scientific endeavours and academic positions, and to enhance Peninsula Health's research profile.

Professor Ekert was also a *Member* of the Peninsula Health Board of Directors for six years, and was a former *Chair* of the Human Research Ethics Committee.

Prior to his roles at Peninsula Health, Professor Ekert spent more than three decades at The Royal Children's Hospital in Melbourne, where he held many senior research and clinical positions including *Director of the Division of Medicine*.

We wish Professor Ekert a long and enjoyable retirement and thank him for sharing his expertise in research and governance at Peninsula Health.



Professor Henry Ekert AM



Best practice in place for patients affected by stroke

Collaborative goal setting for patients is considered best practice in rehabilitation in Australia, but the concept is not widely implemented in clinical practice across the nation.

Emphasising patient and family input in goal setting is thought to positively influence behaviour change and help patients with stroke recover more effectively.

Led by Peninsula Health’s Senior Physiotherapist Rebecca Barnden, the team at Golf Links Road (GLR) Rehabilitation Centre in Frankston evaluated perceptions of the model with staff, family members and patients and considered whether this model of collaborative goal setting should be offered more widely across sub-acute services.

“IT EMPOWERS THE PATIENTS TO HAVE MORE CONTROL OVER THEIR REHABILITATION JOURNEY.”

“One of the recommendations in the Clinical Guidelines for Best Practice Management is to involve the patient and their carer in decisions, so specifically setting goals as to what is important to them,” says Ms Barnden. *“It empowers patients to have more control over their rehabilitation journey.”*

The National Stroke Foundation compiles an audit of rehabilitation and acute services every two years. The most recent report (2016) showed that only about 20% of health

services in Australia routinely set goals collaboratively with the interdisciplinary team and stroke survivors.

In response to the Foundation’s 2012 audit, which showed only 13% using goal setting, a pilot model of collaborative goal setting was introduced at Golf Links Road.

“Within the first week the patient or family member has discussions around what’s important to them and what they want to achieve,” says Ms Barnden. *“They formulate a plan and then come to a meeting with all the people involved to agree on the goals, and then we all work towards those common goals.”*

Rebecca Barnden and Stephanie Gleeson





Carole Gore, Stroke Nurse Practitioner, patient Gordon Orchard with Rebecca Barnden, Senior Physiotherapist and Stephanie Gleeson, Senior Occupational Therapist

In addition to evaluating perceptions and satisfaction, the team also wanted to get an idea from staff what the enablers or barriers are to the process.

“Even though the guidelines say this is ‘Best Practice’ and should happen, there are no guidelines to say what it should look like,” adds Ms Barnden. *“So of the 20% of services that have collaborative goal setting, all are likely to be different.”*

“Essentially what we found is that overwhelmingly the staff, patients and family members felt it was a positive process, and it should continue and be offered to all stroke survivors.”

“95% OF STAFF FELT THE MODEL ENHANCED THE STROKE SERVICE.”

When surveyed, 95% of staff felt the model enhanced the stroke service at GLR.

“There are 10 recommendations out of the research findings, which will now be implemented to refine our model, before we share our findings with other health services,” says Ms Barnden.

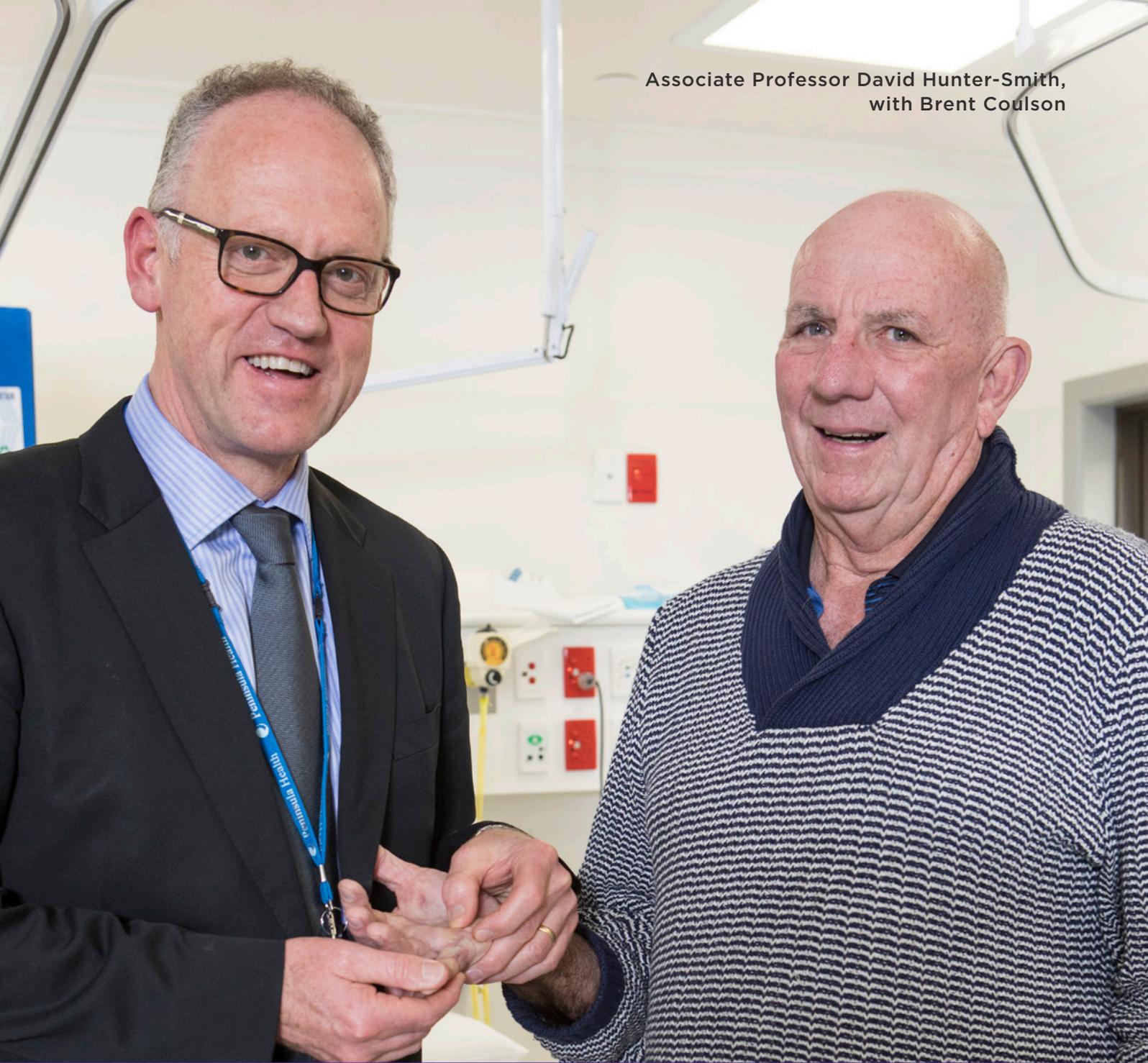
Ms Barnden is now working with Dr Nadine Andrew, Senior Research Fellow in the Academic Unit, on a related Heart Foundation-funded project with Monash University, to develop a goal-setting package for clinicians to use with stroke survivors.

The Victorian Stroke Clinical Network funded this research. It was a collaborative study with the Translational Public Health Division, Stroke and Ageing Research, at Monash University.



WHAT IS COLLABORATIVE GOAL SETTING?

- Patients and their families and carers being given the opportunity to participate in the process of setting goals
- Goal setting that incorporates the views of all health professionals as well as the patient and their family
- Patients and their families and carers having their wishes and expectations established and acknowledged
- Goals should be individualised, specific and challenging.



Associate Professor David Hunter-Smith,
with Brent Coulson

Exploring treatments for Dupuytren's contracture

Around five per cent of people in Frankston and the Mornington Peninsula have Dupuytren's disease, a progressive disease which causes a person's fingers to curl downwards, deforming the fingers and potentially restricting how they can use their hands.

"Pain is not a common complaint for people with Dupuytren's disease, but it certainly can affect their ability to function normally at home and at work," explains Peninsula Health plastic surgeon Associate Professor David Hunter-Smith.

Traditionally the treatment for Dupuytren's disease has been surgical. However, Associate Professor Hunter-Smith and his team at Peninsula Health have recently started using Clostridial collagenase histolyticum treatment, which is far less invasive for patients than traditional surgery.

They are currently conducting a study to evaluate the impact this new treatment has on patients' lives and whether it should be used as a viable choice for treatment of Dupuytren's disease across the Australian public health system.

"There's the traditional surgical approach where we make cuts down the fingers, peel back the skin and take out the disease," explains Associate Professor Hunter-Smith.

"For many patients surgery can be very effective, however a significant number of patients have a very prolonged recovery that can be quite traumatic."

The alternative treatment consists of collagenase being injected under local anaesthetic, and doesn't require any hospitalisation. When Associate Professor Hunter-Smith set up a dedicated Dupuytren's Clinic at Frankston Hospital in February 2016, Peninsula Health became the first public health service in the country to have a dedicated clinic that treats patients with Dupuytren's disease with collagenase.

"We know that collagenase is safe and effective in releasing contracture," says Associate Professor Hunter-Smith.

"What hasn't been well studied is 'patient reported outcome measures' – what the patients actually describe as their experience of the new treatment and its physical outcome, versus patients having the traditional surgery. We know that we can correct the contracture angles of the finger, but we don't know if that actually translates to a functional difference to people's lives."

"We want to focus on the whole patient and what matters to them, not just the contracture – it's all about person-centred care."

Associate Professor Hunter-Smith and associate investigators Associate Professor Warren Rozen, Dr Bethany Reynolds and Dr Vicky Tobin have started following patients who are treated with collagenase in the clinic.

"We're using three different Patient Reported Outcome Measures: URAMS, Southampton and the Patient Set – where the patient actually sets their own concerns," explains Associate Professor Hunter-Smith.

"When a patient comes in we ask what their three biggest concerns are – for example washing their face, playing golf, or getting dressed – then we treat them and ask them how well we did at fixing their specific issues, rather than using a set of broad questions that may not relate to what is important in their life."

Three new patients are treated with collagenase in the clinic every week and will be followed up by the team at six weeks, three months and six months post procedure with plans to follow people for 18 months. The research team is using the

REDCap data collection application to securely store more than 600 fields of information about each participant.

"We are already collaborating internationally and will be in a strong position moving forward to contribute significantly to the global understanding of how to best manage Dupuytren's disease, which will be fantastic," says Associate Professor Hunter-Smith.

"By undertaking these studies we're making sure our patients have access to the best available contemporary care in the public health sector."



WHAT IS DUPUYTREN'S CONTRACTURE?

- A common condition that causes a thickening and shortening of the tissue in the palm, resulting in a progressive clawing or contracture
- The cause is unknown, but 80% of patients have a family history and northern European ancestors
- The Genome Wide Association (GWAS) study has identified over 20 genes associated with the condition and much research is underway globally
- Treatment options include radiation (very early stages), needle release (fasciotomy), Collagenase injections and surgery
- Dupuytren's contracture is named after Baron Guillaume Dupuytren – who first discovered the disease in the early 1800s.



Investigating the link between diabetes and dementia

For the last decade, the Academic Unit, led by Professor Velandai Srikanth, has led the way in investigating the link between type 2 diabetes and dementia. Type 2 diabetes is linked with an increased risk of dementia in later life, and both are growing problems for the Mornington Peninsula community.

“Victorian researchers started working in this area 10 years ago, so we have driven the field nationally and internationally,” says Professor Srikanth. “We have found that type 2 diabetes is associated with a greater risk of brain cell loss (brain atrophy), and identified which areas of the brain are more prone to such loss. We are now investigating why this may occur in a unique twin study.”

“The brain is an extremely vascular organ, depending on blood supply for its health. Diabetes may affect blood flow to the brain because of its ability to affect the heart and blood vessels. So one theory is that diabetes causes brain cell loss, because of its effects on the vascular system.”

“It’s a study measuring blood flow to the brain in 22 discordant (non-identical) twin pairs in late middle age (aged around 60), where one twin has type 2 diabetes, and the other doesn’t.

So any differences between the pair are not explained by age, or different environment early in life, and their genetic make-up is very similar,” adds Professor Srikanth.

“So if we found a difference in blood supply to the brain between twin pairs, that difference would be more likely to be due to diabetes itself. The unique design of this study allows us to form strong conclusions about the results.”

“IF WE CAN IDENTIFY A PATHWAY, THEN WE CAN STOP THE BAD EFFECTS OF DIABETES ON THE BRAIN.”

The team’s main aim is to uncover why type 2 diabetes may lead to brain atrophy. It will then become clearer how to intervene to try to delay or prevent the onset of future dementia. Not everyone with type 2 diabetes develops dementia, but some appear to be at a higher than average risk.

“What we are trying to understand is the biological mechanisms that link diabetes with brain health,” says Professor Srikanth. “If we can identify a pathway, then we can develop interventions that can stop the bad effects of diabetes on the brain.”

“We measured the twins’ cognitive function, took blood samples, and measured their brain structure and blood supply using specialised MRI scans,” explains Professor Srikanth.

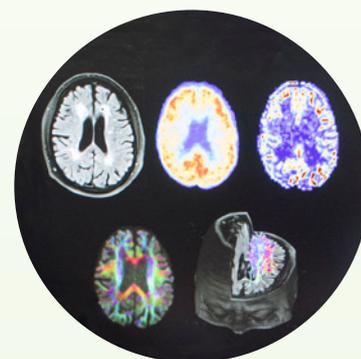


Academic Unit staff Dr Chris Karayiannis, Professor Velandai Srikanth, Dr Chris Moran with twins, Paul Carton & Gerry Carton

“Irrespective of whether the twin had diabetes, we found that the overall blood supply was the same. Although the twins performed differently in cognitive tests, these findings suggest that altered blood flow to the brain may not be the simple cause.”

“There might be other mechanisms by which this cognitive difference is occurring. It is possible that chronic brain inflammation may be present in people with type 2 diabetes, as we know that this occurs in other parts of the body, so this is the next question we are going to address,” explains Professor Srikanth.

The Academic Unit is based in the Department of Medicine at Frankston Hospital and co-located at Monash University.



- Dementia is the term used to describe the symptoms of a large group of illnesses which cause a progressive decline in a person’s functioning
- By 2025 the number of people with dementia is expected to increase to 536,164
- Without a medical breakthrough, the number of people with dementia is expected to reach 1,100,890 by 2056.

Source: Alzheimer’s Australia





Michelle Shanti, Consumer Consultant and Liam Shaw, Acute Mental Health Inpatient Unit Nurse Unit Manager, with a patient

The changing face of nursing handover in mental health

Traditionally nursing handover on Acute Mental Health Inpatient Units is done away from the patient, without their direct involvement in the handover process.

Researchers at Peninsula Health are examining the way consumers with mental illness are involved in their care.

“Nursing handover involving patients has been long standing in general medical wards since the 1990s,” explains Associate Professor of Nursing Research at Peninsula Health, Virginia Plummer.

“However in mental health settings, nurses would use clinician-only handover rooms, out of concern that patients may be distressed by the open discussion.”

Mental health nurses and consumers participated in the mixed-method research, which is the first study of its kind in Australia.

“We wanted to find out about the effectiveness of consumer involvement in the nursing handover process in an Adult Mental Health Unit,” says Associate Professor Plummer.

“BY BEING INVOLVED, ALL OF THAT CONFUSION JUST GOES AWAY, BECAUSE YOU ACTUALLY KNOW WHAT IS GOING ON INSTEAD OF WONDERING.”

“We conducted a focus group for consumers before completing a content analysis of those findings.”

Two main themes were identified – **‘Behind Closed Doors’** and **‘Being Involved’**.

Consumers felt they should be involved as they were the main focus of discussions, while they also saw the benefits of nursing handover being collaborative and open.

“It’s important that we can contribute because we are the subject,” said one participant. *“By being involved, all of that confusion just goes away, because you actually know what is going on instead of wondering.”*

The research team, which includes Consumer Consultant, Michelle Shanti, and Acute Mental Health Inpatient Unit Nurse Unit Manager, Liam Shaw, trained nurses to conduct handover with consumers present, including de-escalating strategies if required.

“STAFF AND PATIENTS FIND IT TO BE LARGELY BENEFICIAL.”

Frankston Hospital Acute Mental Health Unit is now involving consumers in one nursing handover each day, with staff and patients finding it to be largely beneficial.

“Collaborative handover involves consumers, improves communication of information and assists consumers in decision-making about their own care,” says Associate Professor Plummer.

“This is consistent with recovery-oriented nursing practice, making a plan for the future and getting back into the community.”

The findings have been published in the International Journal of Mental Health Nursing.



WHAT HAS THIS RESEARCH CONTRIBUTED?

- **Greater insights into the views of consumers with a mental illness**
- **Insights about their need to be involved in handover in an acute mental health unit**
- **Consumers want to receive regular information**
- **Consumers want to feel real participation**
- **Consumers want to be part of the team.**



Sarah Jordan, MePACS Research Manager and Dr Nadine Andrew

Living independently and longer with MePACS

Australia's population is ageing and there are now more people aged 65 and over than at any time in the nation's history.

In 2014, those 65 and over accounted for forty percent of hospital admissions, while this group is just thirteen percent of the population. A multi-disciplinary team of researchers at Peninsula Health is looking at ways to improve health outcomes for this group, by evaluating the impact the MePACS Personal Alarm service has on

Finding time for heart attacks using Google technology

With heart attacks, not only do patients need to get to hospital quickly, staff on call also need to get to hospital as speedily as possible.

Professor Jamie Layland heads the Cardiovascular Research Unit at Peninsula Health. Much of Professor Layland's research is based on clinical and surgical innovations, but on this occasion, in collaboration with St Vincent's Hospital and the Academic Unit at Peninsula Health, Google Maps was the team's main tool.

"No-one before has really focussed on travel time for on-call staff, so we wanted to look at the impact of traffic congestion and distance using this new software and code that Associate Professor Richard Beare from the Academic Unit has developed," says Professor Layland.

Using this software, the team was able to pinpoint differing travel times from staff homes to the two hospitals (St Vincent's and Frankston) at varying times of the day.

"We compared simulated travel time to the two hospitals during peak traffic congestion time (7am and 6pm) with travel at midnight when there is virtually no traffic.



We found that traffic congestion affects staff travel time in the city significantly more than it does around Frankston, which is located in the outer suburban area of Melbourne," explains Professor Layland.

enabling people to live independently for longer, and preventing hospital admissions.

“MePACS has been run by Peninsula Health for over 20 years and has supported a large number of Peninsula residents,” explains Dr Nadine Andrew, Senior Research Fellow in the Academic Unit, who is leading the research.

“We are looking at ways that we can maximise the benefit of MePACS to answer a range of questions about how best to support older people living in the community,” adds Dr Andrew. *“We also want to find ways to improve the system we’re working with to improve outcomes for clients.”*

More than 34,000 people use MePACS, which is a personal alarm service monitored around the clock. Clients press a button for help if they fall or become unwell and telephone operators will respond and identify what help is required.

“We want to evaluate the impact that having the support of the alarm system has and whether it means people can stay independently living at home for longer than they otherwise would,” says Dr Andrew.

“We are intending to work with the Department of Health and Human Services, to examine hospital admissions, ambulance call-outs and Emergency Department presentations as a way of evaluating the benefits of MePACS,” explains Dr Andrew.

Dr Andrew and the team are also interested in looking closely at the reasons why MePACS alarm users press their alarm, and what happens to their health afterwards.

“Forty per cent of people press their alarm because they are unwell – not because they have fallen, and the importance of this in improving healthcare hasn’t been looked at in detail before,” explains Dr Andrew.

“We’re also keen to carefully map what happens to people after they’ve pressed their alarm – what help and further care did they then receive? This may assist in creating better response systems.”

The research is in the preliminary stages, with initial findings expected by the end of 2018.

“IT CAN TAKE YOU 15 MINUTES TO GET IN AT MIDNIGHT, BUT OVER AN HOUR IN PEAK TRAFFIC.”

“You can live extremely close to a metropolitan hospital and it can take you 15 minutes to get in at midnight, but over an hour in peak traffic, when responding to an emergency.”

“That’s vital to know if your goal is to get to hospital within half an hour when responding to a heart attack call-out. Depending on the type of hospital, the information provided by this software may help staff members dealing with heart attacks plan their whereabouts during peak travel congestion time, to ensure they can attend promptly and obtain good patient outcomes.”

The team’s work has led to a second research project currently underway, which is already showing some interesting results.

“This technology can also be applied to map out where heart attack centres are currently placed, and where future centres can be placed, based on the most efficient travel times to a centre, for the patient who suffers a heart attack,” says Professor Layland.

“This is a system and care-based approach that could help deliver better outcomes for healthcare across Victoria, as well as in the local community,” adds Professor Layland.





Compliance in heart failure care

With the increasing prevalence of mobile devices in everyday life, there is great opportunity for this technology to be used to help in the management of chronic diseases.

In partnership with MePACS, CSIRO and Med-Tech solutions, researchers are looking at how mobile technology can be used to improve compliance in daily weight monitoring in patients with heart failure.

To illustrate the national potential and reach of the MePACS mobile alarm device, the team also partnered with patients in Western Australia through Curtin University.

Iain Edwards is leading the team at Peninsula Health, which is also looking for ways to improve outcomes, as well as minimising visits to hospital.

“Heart failure is high on the list of avoidable re-presentations for chronic diseases, and we do know that if people better self-manage their heart failure, it improves their quality of life and reduces hospital presentations.”

The key elements for self-management of heart failure include medication management, daily monitoring of signs and symptoms, adherence to a low sodium diet and daily exercise. This trial focused on the element of daily monitoring of signs and symptoms utilising a technology solution.

“We chose heart failure because we know that there is a direct relationship between variation in weight and fluid retention, and fluid retention in patients with heart failure can cause deterioration in health and hospitalisation,” adds Mr Edwards.



Kim Woolley, Heart Failure Nurse
with patient, Osborne Joseph

manage variations in their weight, so that they could better self-manage their condition.”

Patients had a tablet device in their home, which was linked to a Bluetooth® enabled weight scale, so after weighing, data was sent to the tablet and a graph was created and monitored by the research and clinical team to show weight variation over time.

“If there was a variation in the patient’s weight, that would trigger an alert with MePACS,” says Mr Edwards. “If the weight varied one kilo, then the software sent the patient a series of five health questions to investigate the variation.”

More rapid changes in weight and symptoms would trigger a response from the Heart Failure Nurse.

The method builds efficiency in the health service and also offers health professionals early opportunities to intervene should a patient gain weight or fail to register each day.

“The primary outcome was to improve compliance with treatment, while the secondary outcomes led more to quality of life, reduced hospitalisation, and patient satisfaction in using technology to assist their care,” says Mr Edwards.

“Consumers were satisfied with the technology used to enhance their care, and they felt more confident in managing their heart failure.”

The final research outcomes to show whether there was an improvement in treatment compliance with the use of technology will be known early next year.

This research was funded by the Department of State Development, Business & Innovation.

“Since chronic disease is part of our everyday business, it’s important that we consider technology solutions that might improve the care we give,” says Mr Edwards.

“IT’S ABOUT DETECTING DETERIORATION EARLY AND THEN INTERVENING BEFORE THE PATIENT REQUIRES HOSPITALISATION.”

By electronically monitoring the daily management and weighing of patients with heart failure, the team got immediate data which acted as a predictor to actual deterioration, giving health professionals advance warning of impending problems.

“It’s about detecting deterioration early and then intervening before the patient requires hospitalisation,” adds Mr Edwards.

“We encouraged people to weigh themselves daily, and then through monitoring, we were able to support them to better





World-class facilities for research and education

Peninsula Health is partnering with Monash University to build a \$15 million state-of-the-art Research and Education Centre at Frankston Hospital.

“It is the first time we’ll have a unified space for teaching across the precinct,” explains the Professor of Medicine at Peninsula Health and Monash University, Velandai Srikanth.

“It will also provide a space where researchers and clinicians from different areas, across both organisations, can collaborate together on research that will make a real difference in the community.”

“POPULATION RESEARCH HELPS US TO UNDERSTAND OUR COMMUNITY BETTER – SO WE CAN DELIVER THE RIGHT HEALTHCARE, AT THE RIGHT TIME.”

Peninsula Health Executive Director of Medical Services, Dr Tim Williams, explains that by conducting large-scale research efforts on topics relevant to the local community, Peninsula Health can find ways to improve health outcomes for people living locally, and beyond.

“Engaging more in public health research will help us to understand our community and their needs better,” says Dr Williams.

“It also provides the community with an opportunity to participate in improving healthcare generally, not just on the Peninsula, but in Australia as a whole,” he adds.

“A PRIORITY FOR PENINSULA HEALTH RESEARCH IS CHRONIC DISEASE.”

A major health issue that affects many on the Peninsula and is a priority for Peninsula Health research is chronic disease of all kinds.

“Chronic disease management is not just about treating people, it is also about trying to manage the risk through prevention strategies, as well as avoiding deterioration and the need for in-patient hospital treatment,” explains Professor Srikanth. *“The new centre will be a hub to bring this program together.”*

The pair has been working closely with Monash University on the design of the purpose-built centre.

“On the research floor there will be office spaces, meeting rooms, hot-desk working areas for visitors and a laboratory to assist clinical research,” says Dr Williams.

The Peninsula Clinical School, where Monash University medical students are taught, will be located on the education floor, as will the library and learning areas.

“The technology will allow for different teaching methods and styles, which from a modern learning point of view, are state-of-the-art,” says Dr Williams.

“For example if there are other healthcare students based at Monash University’s Peninsula campus who would benefit from inter-professional teaching that is being provided at the Peninsula Clinical School, then there will be technology that would enable them to participate remotely,” adds Professor Srikanth.

The centre will also provide greater impetus for healthcare professionals to train and work at Peninsula Health.

“You will find students want to come back to a setting with really good teaching and learning, and with options for involvement in research once they have finished their degree,” says Professor Srikanth. *“It will help us to continue to attract the best people to come to live and work on the Peninsula.”*

Construction of the Research and Education Centre is scheduled to start in early 2018.



Dr Tim Williams and Professor Velandai Srikanth

Research Governance

Members of Research Committees 2016/17

Research and Academic Committee

The strategic objectives for the Research and Academic Committee are to:

- Foster excellence in research and innovation at Peninsula Health to improve the health outcomes for our community;
- Enhance Peninsula Health's ability to successfully compete for health research funding;
- Foster the dissemination of research findings through publication in peer-reviewed journals.

Professor Henry Ekert AM
(Chair)

Dr Nathan Pinskiar
(Deputy Chair)

Ms Peta Murphy

Professor Velandai Srikanth

Professor Terry Haines

Dr Tim Williams

Professor John Botha

Mr Nigel Broughton

Dr Cylie Williams

Ms Lee-Anne Glavarino

Associate Professor
Virginia Plummer

Ms Elizabeth Wilson

Human Research Ethics Committee

The Human Research Ethics Committee (HREC) reports to the Board of Directors through the Research & Academic Committee. The role of the HREC is to:

- Ensure 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 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
Researcher (Chair)

Dr Tim Williams
Executive Sponsor

Professor John Botha
Director of Research

Dr Stephen Bright
Healthcare Professional

Ms Sally Church
Healthcare Professional

Ms Jan deClifford
Senior Pharmacist

Ms Joanna Green
Lawyer

Professor Debra Griffiths
Researcher

Dr Dilinie Herbert
Ethicist

Ms Alice Irving
Laywoman

Mr Richard Ivice
Layman

Ms Mariangela Prib
Chaplain

Associate Professor Ravi
Tiruvoipati
Researcher

Dr Ashley Webb
Researcher

Dr Cylie Williams
Researcher

Low Risk Research Subcommittee

Dr Cylie Williams (Chair) <i>Community Health and Allied Health Research Lead</i>	Mr Peter Raphael <i>Community Member</i>
Mr Nigel Broughton <i>Deputy Director of Research Director of Orthopaedic Research</i>	Associate Professor Warren Rozen <i>Plastic Surgeon</i>
Mr Sean Chinnathumby <i>Clinical Research Nurse</i>	Mr Michael Wang <i>Physiotherapist</i>
Ms Lee-Anne Clavarino <i>Manager Office for Research</i>	Ms Sharon White <i>Operations Director Women's Children's and Adolescent Health Director Quality and Innovation</i>
Ms Alison Lunt <i>Occupational Therapist</i>	
Dr Michael Chae <i>Registrar – Plastic Surgery</i>	

Scientific Advisory Subcommittee

Professor John Botha <i>Director of Research Director of Intensive Care</i>	Dr Sam Leong <i>Consultant Anaesthetist</i>
Mr Nigel Broughton <i>Deputy Director of Research Director of Orthopaedic Research</i>	Associate Professor Virginia Plummer <i>Associate Professor Nursing Research</i>
Associate Professor Ernie Butler <i>Head of Neurology</i>	Dr Cylie Williams <i>Community Health and Allied Health Research Lead</i>
Associate Professor Miodrag Dodic <i>Year 4c and Research Coordinator Peninsula Clinical School</i>	

Grants

Williams, C., Taylor, N., Haines, T. Evaluation of additional allied health staffing models across three health services. *Department of Health and Human Services Targeted Funding*, \$116,566

Moran, C., Neuroimaging in type 2 diabetes. *Platform Access Grant, Monash University*, \$10,000

Srikanth, V. Cerebrovascular diseases and brain ageing. *NHMRC CDF/Heart Foundation Future Leader Fellowship (2014-2018)*, \$150,000 for 2017

Srikanth, V. Type 2 Diabetes mellitus and vascular brain ageing. *NHMRC Project Grant (2016-2021)*, \$148,000 for 2017

Andrew, N. *NHMRC Early Career Research Fellowship*. \$70,000 for 2017

Moran, C. *NHMRC/ARC Early Career Dementia Research Fellowship*, \$65,000 for 2017

Yang, J., Beare, R., and Mackay, M. Characterising structure function relationships in childhood stroke using advanced brain imaging. *Brain Research Foundation*, \$20,000

Smith, J.A., Atala, A., Hunter-Smith, D.J., Rozen, W.M., Meagher, L., Jenkin, G., Molotnikov, A., Frith, J., Murphy, S.V., Jain, K. 3D-bioprinted scaffold of trapezium in basal thumb arthritis management. *Monash Institute of Medical Engineering Seedfund Grant*, \$50,000

McLelland, G., Hall, H., Plummer, V., Dix, S., Tremayne, A., Kumar, A., East, C.E., Carr, B., Buttigieg, H., Fernando S. Midwifery and medical students' knowledge, self-efficacy and satisfaction following simulation of inter-professional management of primary postpartum haemorrhage. *Monash University Learning and Teaching Research Grant*, \$15,000

Reed, F., Plummer, V., Heriot, K., Stergiou, J. Implementing Safewards in acute health. *DHHS Research Grant*, \$50,000

Projects reviewed under the streamlined ethical review system in Victoria or National Mutual Acceptance

- *Deepening our Understanding of Quality in Australia*
PI: Mr Nigel Broughton
- *Australian and New Zealand Hip Fracture Registry*
PI: Mr Nigel Broughton
- *A phase 3, 24-week double-blind, placebo-controlled, parallel-group, efficacy and safety study of reslizumab subcutaneous dosing (110 mg every 4 weeks) in patients with oral corticosteroid dependent asthma and elevated blood eosinophils*
PI: Associate Professor David Langton
- *A multicenter, open-label, safety extension study with benralizumab (MEDI-563) for asthmatic adults on inhaled corticosteroid plus long-acting B2 agonist*
PI: Associate Professor David Langton
- *Phase Ib trial of pembrolizumab (MK-3475) in combination with dinaciclib (MK-7965) in subjects with hematologic malignancies*
PI: Associate Professor John Catalano
- *Endoscopic polypectomy on clopidogrel; a randomized controlled trial*
PI: Dr Richard La Nauze
- *PALbociclib CoLlaborative Adjuvant Study: A randomized phase III trial of palbociclib with standard adjuvant endocrine therapy versus standard adjuvant endocrine therapy alone for hormone receptor positive (HR+) / human epidermal growth factor receptor 2 (HER2)-negative early breast cancer*
PI: Dr Jacqui Thomson
- *Determining the supportive care needs and access to supportive care services of men with prostate cancer receiving hormone therapy: a cross sectional study*
PI: Dr Niall Corcoran
- *A Population-Based Prostate Cancer Outcomes Registry*
PI: Mr Paul Gilmore
- *Cancer malnutrition point prevalence survey*
PI: Jenna Riley
- *A randomised, feasibility, safety and biological efficacy placebo-controlled trial of aspirin in ICU patients with the systemic inflammatory response syndrome*
PI: Dr Brij Verma
- *Germline DNA repair defects in men with metastatic prostate cancer*
PI: Dr Emma Beardsley
- *National study of family experiences of organ and tissue donation*
PI: Associate Professor Andrew Davies
- *Intensive care outcomes from epidemic asthma following a thunderstorm*
PI: Dr Ashwin Subramaniam
- *A NOVEL observational longitudinal study on patients with a diagnosis or suspected diagnosis of asthma and/or COPD to describe patient characteristics, treatment patterns and the burden of illness over time and to identify phenotypes and endotypes associated with differential outcomes that may support future development of personalised treatment strategies – Observational study of obstructive lung disease*
PI: Associate Professor David Langton
- *Managing reports of patient / visitor aggression in hospitals: a pilot study*
PI: Fiona Reed
- *Plasma-Lyte 148® versus Saline (PLUS) study*
PI: Associate Professor Ravi Tiruvoipati
- *A randomized, multicenter, open-label, phase 3 study of acalabrutinib (ACP 196) versus investigator's choice of either idelalisib plus rituximab or bendamustine plus rituximab in subjects with relapsed or refractory chronic lymphocytic leukaemia*
PI: Associate Professor John Catalano
- *Australian Mepolizumab Registry*
PI: Associate Professor David Langton
- *Implementation of upper limb guidelines after stroke – a qualitative exploration*
PI: Catherine Devanny
- *Victorian Pancreatic Cancer Biobank*
PI: Dr Leon Fisher
- *A phase 3, randomized, double blind, placebo controlled, multicenter study of bendamustine and rituximab (BR) alone versus in combination with acalabrutinib (ACP 196) in subjects with previously untreated mantle cell lymphoma*
PI: Associate Professor John Catalano
- *A phase 3, randomized, open-label, multicenter study comparing the efficacy and safety of the Bruton's Tyrosine Kinase (BTK) inhibitors BGB-3111 and ibrutinib in subjects with Waldenström's Macroglobulinemia (WM)*
PI: Associate Professor John Catalano
- *Appraisal of patient food service models to best support improving nutrition care*
PI: Jenna Riley
- *Australian Breast Device Registry*
PI: Ms Patricia Terrill
- *Does additional allied health services increase the trajectory of improvement in functional independence of the subacute patients?*
PI: Dr Cylie Williams
- *Phase 2 study of the combination of ibrutinib plus venetoclax in subjects with treatment-naïve chronic lymphocytic leukemia / small lymphocytic lymphoma*
PI: Associate Professor John Catalano

- *Randomised, double-blind (sponsor open), placebo-controlled, multicentre, dose ranging study to evaluate the efficacy and safety of danirixin tablets administered twice daily compared with placebo for 24 weeks in adult participants with chronic obstructive pulmonary disease (COPD)*
PI: Associate Professor David Langton
- *Evaluation of falls prevention in hospitals*
PI: Vicki Davies
- *Evaluation of Doorway: A model designed to achieve social inclusion through a new approach to housing and support*
PI: Sharon Sherwood
- *Reduction of oxygen after cardiac arrest The EXACT trial*
PI: Associate Professor Pam Rosengarten
- *Consumer and carer experience of tribunal survey project*
PI: Glenda Wyatt
- *Knowledge translation interventions; which is most effective in upper limb rehabilitation?*
PI: Catherine Devanny
- *Paediatric Department Outpatients failure to attend April 2016*
PI: Dr Kathy McMahon
- *Pain and anxiety during abdominal wound dressing change: a cohort study*
PI: Dr Ali Andrabi
- *The diurnal variation in the recognition and response to clinical deterioration: a retrospective observational study*
PI: Naomi Pratt
- *How active are stroke patients at home compared in hospital? An observational comparative study*
PI: Jenica Parker
- *Slow Down Mate: Improving alcohol cultures among trade students in Frankston and Mornington Peninsula*
PI: Lisa Abbott
- *Implementing Safewards in acute health services*
PI: Fiona Reed
- *Understanding patient experience of accessing after hours health services in the South Eastern Melbourne Region*
PI: Dr Rona Weerasuriya
- *Does removing the FRAT risk status impact falls prevention: A stepped wedge cluster randomised control trial*
PI: Joanna Jellett
- *Patient and carers preparedness for discharge post rehabilitation*
PI: Caitlin Casson
- *A Phase IV multicenter, observational study in Chronic Immune Thrombocytopenia patients on Revolade® treatment in emerging markets*
PI: Dr Huy Tran
- *Evaluation of the innovative Supported Patient Centred Early Discharge (SPeED) Program for geriatric inpatients*
PI: Dr Nataliya Shkuratova
- *The perception and approaches of medical officers on the management of severe asymptomatic hypertension*
PI: Stella Koo
- *Following the results of implementing Clostridial collagenase histolyticum treatment for Dupuytren's disease at Peninsula Health*
PI: Associate Professor David Hunter-Smith
- *Quality of life implications of mastectomy for patients undergoing cytotoxic chemotherapy for breast cancer*
PI: Dr Yolanda Antill
- *Developing standardised methods for setting patient centred goals in stroke*
PI: Dr Nadine Andrew
- *Experiences of a community Men's Behaviour Change Program: A descriptive analysis*
PI: Dr Cylie Williams

Projects reviewed by the Low Risk Research Subcommittee

- *The efficacy of cholecystectomy in patients that had a positive HIDA (hepatobiliary iminodiacetic acid) scan with typical or atypical biliary pain*
PI: Dr Senthilkumar Sundaramurthy
- *Tests of physical function in acute exacerbations of chronic obstructive pulmonary disease*
PI: Michael Chang
- *The relationship among resilience, job stress and burnout in nurses and midwives*
PI: Associate Professor Virginia Plummer
- *Prevalence and patterns of dual diagnosis presentations amongst mental health and alcohol and drug service users in Frankston and Mornington Peninsula*
PI: Dr Stephen Bright
- *Australian Absorb Registry*
PI: Dr Robert Lew
- *Evaluating the impact of preoperative telephone support /education on symptoms of anxiety and depression post total knee replacement*
PI: Sharon Allsop
- *An investigation of nurses' understanding of and ability to deliver trauma-informed care on acute adult mental health inpatient units*
PI: Dr Michael Olasoji

Quality assurance projects considered by Executive Sponsor Research

- Performance of age adjusted D-dimer in older patients with suspected pulmonary embolism
- An audit on use of antibiotics for Community Acquired Pneumonia at Frankston Hospital 2016
- Is negative HER2 immunohistochemistry result sufficient for showing absence of HER2 mutation in breast carcinoma?
- Atrial fibrillation project: quality assurance
- Retrospective analysis of cystectomies and wound complications
- An international survey on aminoglycoside practices in critically ill patients
- Evaluation of current statewide paediatric pneumonia management guidelines: assessing adherence
- Evaluation of the appropriateness of the use of inhalers in patients with COPD
- Blood pressure management with pharmacological interventions among asymptomatic patients with hypertension at Frankston and Rosebud Hospitals: a retrospective audit
- A retrospective analysis of polypharmacy in general medical patients aged 80 and older
- Chloral hydrate as a sedative in a paediatric population
- A retrospective audit of secondary fracture prevention at Peninsula Health
- Quality audit of the prevalence of prescribing contraindications to NSAIDS
- Therapeutic drug monitoring of vancomycin at Peninsula Health: Retrospective drug utilisation evaluation
- Clinical utility- safety and outcomes for patients with low/ intermediate risk chest pain using high sensitivity troponin
- Predictors of the difficulty/failure of radial angiography
- Current Australian trends in the investigation for diagnosis of coronary artery disease
- Testing the electronic data capture system for REDCap with patient data from the Clostridial collagenase histolyticum (CCH) for Dupuytren's Disease Clinic
- A review of aural foreign bodies in a major Victorian hospital. A five year experience.
- Thunderstorm asthma - analysis of follow-up telephone survey
- Outcomes of acute coronary syndromes at Peninsula Health
- The value of serum folate measurement in older persons admitted to The Mornington Centre
- Analysis of mandibular CTA scans
- Does physiotherapy management of rotator cuff tendinopathy adhere to best practice? A clinical audit
- Assessment of clinician's knowledge of high risk drugs at a metropolitan hospital
- Review of treatments in myasthenia gravis over the past 10 years
- Radial head arthroplasty and complication rates: a case series
- Contributing factors to development of Stage 2 pressure injuries: a retrospective cohort study
- Ability of the PRE-DELIRIC and E-PRE-DELIRIC to predict critically ill patients' risk of delirium in routine practice: A prospective observational study
- Predictors of outcome in acute ischaemic bowel
- A retrospective study exploring the clinical value and costs of routine renal imaging in women with uncomplicated pyelonephritis
- Patient satisfaction survey in medication-related decision making

Projects considered by the Human Research Ethics Committee

- *Warraroo Community Choir*
PI: Kylie Morgan
- *Collaborative Goal Setting with Stroke Survivors: a person-centred approach*
PI: Rebecca Barnden
- *Physiology of acute coronary syndromes: Focus on inflammation and microvascular dysfunction*
PI: Dr Jamie Layland
- *Does hormone therapy, exercise or a combination of both, improve pain and function in post-menopausal women with Greater Trochanteric Pain Syndrome (GTPS)? A randomised controlled trial*
PI: Dr Tania Pizzari
- *Children's Dental Program – Expanded Project*
PI: Professor Michael Morgan
- *Using computational fluid dynamics to evaluate the mechanism of action of bronchial thermoplasty in severe asthma*
PI: Associate Professor David Langton

Celebrating Research 2016

Celebrating Research is an annual event that celebrates and recognises research at Peninsula Health.

Jeremy Anderson Orator 2016

Professor Terry Haines
Director of Allied Health Research Unit
Monash University / Monash Health

Research Prize Winners

Aged Care & Chronic Disease Management

Mr Nigel Broughton
The popularity contest: Outcome measures post hip and knee arthroplasty.
Experienced Researcher Category

Cameron Green & Tess Baker
Clinical and electrophysiological predictors of respiratory failure in Guillain-Barré Syndrome: a systematic review.
Novice Researcher Category

Health Services & Workforce

Mr Nigel Broughton
Concerns about the health performance and conduct of surgeons: a study of notifications to the Australian Health Practitioner Regulation Agency.
Experienced Researcher Category

Jacqueline Ridgway
Audit of x-ray interpretation accuracy of Peninsula Health ED Advanced Musculoskeletal Physiotherapists.
Novice Researcher Category

Innovative Technology & Therapies

Professor John Botha
A pilot randomised controlled trial comparing proportional assist ventilation with pressure support ventilation in patients suitable for weaning from mechanical ventilation.
Experienced Researcher Category

Dr Michael Chae
3D surgical planning solution in autologous breast reconstruction.
Novice Researcher Category

Patient Safety

Dr Cylie Williams
Simulation based education of health professional students does not reduce inpatient falls.
Experienced Researcher Category

Joanna Jellett
Assessing the validity of the Peninsula Health FRAT in the acute setting.
Novice Researcher Category

Person Centred Care

Alicia James
Health related quality of life of children with calcaneal apophysitis: child & parent perceptions.
Experienced Researcher Category

Julia Yuncken
Better understanding the provision and retention of podiatry specific diabetes education.
Novice Researcher Category

Bindu Joseph & Michelle Shanti
Using lived experience of consumers and carers to enhance mental health training; outcome of an innovative approach in staff training.
Special Commendation

Population Health & Integrated Care

Dr Manuja Premarante
Diabetes is an independent predictor of false negative stress echocardiography in patients with chest pain.
Experienced Researcher Category

Jo Sanders
Frequency and outcome of kidney donation from intensive care patients with acute renal failure requiring renal replacement therapy.
Novice Researcher Category

Student

Ru dee Chung
Process mapping in the intraoperative period.
1st Prize

Mitchell Pryce
3D printing of wrist pathologies – an educational tool for patients.
Equal 2nd Prize

Paari Palaniswami
Review of the paediatric outreach service at the Mahogany Rise Primary School clinic.
Equal 2nd Prize

Hamish Brown & Stefan Dodic
Characteristics, management, and clinical outcomes of patients admitted to the Intensive Care Unit with chronic obstructive pulmonary disease.
3rd Prize

Scientific Poster Prize Winners

Aged Care & Chronic Disease Management

Dr Katrina Sands, Robyn Attoe, Dr Elisabeth Nye
A pilot observational study at Frankston Hospital of delirium diagnosis in consecutive, unselected acute general medical admissions: completion of the 4AT cognitive assessment tool by medical staff in all patients over 65 years of age.

Health Services & Workforce Prize

Dr Simone Sandler, Dr Kathy McMahan, Dr Leon Pikkert
Hepatitis C screening in paediatric patients at risk of vertical transmission.

Innovative Technology & Therapies

Mitchell Pryce, Associate Professor David Hunter-Smith, Associate Professor Warren Rozen, Dr Vicky Tobin
3D printing of wrist Pathologies – An educational tool for patients.

Patient Safety

Joint winners

Viviane Khalil, Karen Chin, Danica Furtula, Melissa Tran
Pharmacists' intervention on the prescribing of serotonin syndrome inducing drug combinations- A single centre study.

Dr Steven Leonard, Dr Jennifer Nagao, Dr Jayantha Rupasinghe
Despite protocols, more time is taken to administer thrombolysis in acute ischaemic (AIS) patients; more with after-hours presentations.

Person Centred Care

Kylie Ball, Nicole Howell
Diabetes education department insulin pump (GSII) service evaluation – acute service Frankston Hospital.

Population Health & Integrated Care

Dr Mark Savage, Cameron Green, Brandon Thia, Ross Kung, Dinushka Perera, Associate Professor Ravi Tiruvoipati
Factors associated with ICU admission following presentation to the Emergency Department for self-poisoning.

Publications

- Ackerman, I. N., Bucknill, A., Page, R. S., Broughton, N. S., Roberts, C., Cavka, B., . . . Brand, C. A. (2017). Preferences for disease-related education and support among younger people with hip or knee osteoarthritis. *Arthritis Care & Research (Hoboken)*, 69(4), 499-508. doi:10.1002/acr.22950
- Al Thobaity, A., Plummer, V., & Williams, B. (2017). What are the most common domains of the core competencies of disaster nursing? A scoping review. *International Emergency Nursing*, 31, 64-71. doi:10.1016/j.ienj.2016.10.003
- Alexander, B., Murray, A. L., Loh, W. Y., Matthews, L. G., Adamson, C., Beare, R., . . . Thompson, D. K. (2017). A new neonatal cortical and subcortical brain atlas: the Melbourne Children's Regional Infant Brain (M-CRIB) atlas. *NeuroImage*, 147, 841-851. doi:10.1016/j.neuroimage.2016.09.068
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- Banakh, I., Haji, K., Kung, R., Gupta, S., & Tiruvoipati, R. (2017). Severe rhabdomyolysis due to presumed drug interactions between atorvastatin with amlodipine and ticagrelor. *Case Reports in Critical Care*, 2017, 3801819. doi:10.1155/2017/3801819
- Ben-Avraham, D., Karasik, D., Verghese, J., Lunetta, K. L., Smith, J. A., Eicher, J. D., . . . Srikanth, V., Windham, B. G., Newman, A. B., Walston, J. D., Davies, G., Evans, D. S., Slagboom, E. P., Ferrucci, L., Kiel, D. P., Murabito, J. M., 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
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- Bloomer, M. J., Lee, S. F., Lewis, D. P., Biro, M. A., & Moss, C. (2016). Single-room usage patterns and allocation decision-making in an Australian public hospital: A sequential exploratory study. *Journal of Clinical Nursing*, 25(15-16), 2200-2210. doi:10.1111/jocn.13264
- Bui, T. V., Blizzard, C. L., Luong, K. N., Truong Nle, V., Tran, B. Q., Otahal, P., Srikanth, V., . . . Gall, S. (2016). Fruit and vegetable consumption in Vietnam, and the use of a 'standard serving' size to measure intake. *British Journal of Nutrition*, 116(1), 149-157. doi:10.1017/s0007114516001690
- Busingye, D., Arabshahi, S., Evans, R. G., Srikanth, V. K., Kartik, K., Kalyanram, K., . . . Thrift, A. G. (2017). Factors associated with awareness, treatment and control of hypertension in a disadvantaged rural Indian population. *Journal of Human Hypertension*, 31(5), 347-353. doi:10.1038/jhh.2016.85
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- Green, C., Hendry, K., Wilson, E. S., Walsh, T., Allerhand, M., MacLulich, A. M. J., & Tiegies, Z. (2017). A novel computerized test for detecting and monitoring visual attentional deficits and delirium in the ICU. *Critical Care Medicine*, 45(7), 1224-1231. doi:10.1097/ccm.0000000000002477
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