Contents

Introduction 1

Feature Stories 3

> Bringing CT scans to life: Validating 3D printing in surgery 3

> World-first simulation patient safety research at Peninsula Health 5

> Aquatic physiotherapy may help lessen falls in people with Parkinson's disease 7

> Radiography skills: an untapped asset for emergency departments 9

> Peninsula Health joins global intravenous catheter research project 11

> Researchers examine ancient drug to fight cardiovascular disease 12

> First study to examine the benefits of client involvement in mental health nursing handovers 14

> Assessing the management of humeral shaft fractures 16

Research Governance 18

Publications 23

Grants 24

Celebrating Research 2014 24
Welcome to the 2015 Peninsula Health Research Report. This edition comes at an exciting time as we take a lead role in transforming healthcare for the Mornington Peninsula.

Planning is already underway for a $20 million Academic Centre at the Frankston Hospital campus, with construction expected to begin in 2016. This leading-edge development will include a lecture theatre, meeting rooms, library and research laboratories. The addition of this state-of-the-art facility will create an academic precinct adjacent to the Simulation Centre, and the existing teaching rooms on the Frankston Hospital campus. Once established, this new precinct will confirm Peninsula Health as the premier academic and health research centre for the region, greatly enhancing our profile in population health and integrated care; innovative technology and therapies; aged care and chronic disease management and commercially sponsored and collaborative group clinical trials. The recently completed Research Strategic Plan has already led to the advertisement for a Joint Chair of Medicine between Peninsula Health and Monash University’s Central Clinical School. This key appointment will lead the implementation of our research strategy over the next five years and assist in leading the delivery of teaching to undergraduates from Monash University. Discussions with Monash University also include the development of a co-located Academic Precinct with a research focus on community health, addiction medicine, and chronic diseases. Frankston Hospital is already highly respected as a tertiary teaching facility, where basic and advanced trainees are carefully mentored by senior clinicians. This was reflected in the outstanding 2015 Royal Australasian College of Physicians clinical exam results. The Research Report 2015 celebrates the achievements of researchers across Peninsula Health and highlights their contribution to our community both, through their own research, and their involvement in research partnerships. It also lists the staff and community members who participate in the committees that review and approve the conduct of research at Peninsula Health. We thank the members of these committees for their dedication and commitment.

Some of the research highlighted in this Report includes:

**3D printing and surgery:** One of the hottest topics in medicine is the role of three-dimensional (3D) printing. The technique of 3D printing involves building an object from material which is deposited in liquid form (like ink) layer-by-layer, as the layers are rapidly solidified. In one to 12 hours, we can form 3D objects as ‘simple’ as a breast model that may assist in planning reconstruction or as complicated as a model of a severely curved spine that may assist a practitioner in planning a procedure. Researchers at Peninsula Health are conducting a validation study of their method of 3D printing and assessing the usefulness of the models to surgeons.

**Aquatic physiotherapy and Parkinson’s disease:** Hydro/aqua therapy is so extensively used for many applications it is virtually ubiquitous. There are, however only approximately 10 published aquatic physiotherapy trials worldwide that specifically focus on Parkinson’s disease. An investigation at Peninsula Health is hoping to provide evidence that a new form of aquatic exercise and movement is more effective at improving balance and gait than present methods of aquatic therapy for those with Parkinson’s disease.

**Cardiovascular disease:** Researchers at Peninsula Health in collaboration with researchers from St Vincent’s Hospital are investigating the use of common anti-inflammatory medication to reduce major adverse cardiac events and improve health-related quality of life for patients who present with acute coronary syndromes.

The small snapshot of research presented here is intended to be stimulating and illuminating. I hope you will find inspiration in this Research Report as it celebrates the breadth and commitment of our researchers.

Ms Sue Williams
Chief Executive Officer
Research Activity 2014/15

Publications considered for approval

Projects considered for approval

Abstracts submitted for Celebrating Research 2014

33

107

91

External presentations and posters

Staff enrolled in PhDs

Clinical trials and other multisite research reviewed through the streamlined ethical review system approved to commence at Peninsula Health

65

11

27
One of the hottest topics in medicine is the role of three-dimensional (3D) printing. The technique of 3D printing involves building an object from material which is deposited in liquid form (like ink) layer-by-layer, as the layers are rapidly solidified.

In one to 12 hours, we can form 3D objects as simple as a breast model that may assist in planning reconstruction or as complicated as a model of a severely curved spine that may assist a practitioner in planning a procedure. The original records are from the multiple images made by CT scans.

The challenge is to take these 2D images and use them as instructions for the printer, transforming them into 3D models. Once you have a model, you can pick it up, rotate it with ease and examine it whether you are a clinician, student doctor or a patient.

In the Department of Surgery at Peninsula Health, a team led by Associate Professor Bob Spychal, Associate Professor Warren Rozen, and Associate Professor David Hunter-Smith.
Warren Rozen, and Dr Michael Chae has been busy 3D printing various anatomical models to validate their technique. Some of these models have already been evaluated by surgeons for their use to plan complex operations and improve surgical outcomes.

The models have also been used to teach medical students. So far in the project we have printed models of the body as diverse as tumour-invaded and distorted jaw bones, hips and breasts which had been removed. We used these 3D prints to act as templates for reconstruction. In addition, we have printed models of kidney tumours and damaged bones to assess their value in planning surgery.

Our 3D prints have even been tested as shoe fillers for patients who have undergone a toe or partial foot amputation. The study has also collected information on whether the use of 3D printouts can assist patients in their understanding of their own anatomy to enhance explanation of a proposed treatment.

At Peninsula Health, open-source software has been used to enable CT scans to drive newly available affordable commercial 3D printers to make fast accurate anatomical models.

Our work in assessing the value to clinicians of bringing it ‘to the bedside’ has resulted in multiple publications, invited reviews, conference posters, and a book chapter. The research excellence has also been recognised by a special award to Dr Michael Chae at the 2014 Peninsula Health Registrar Research Prize and a 2015 Monash University Faculty of Medicine, Nursing and Allied Health Postgraduate Excellence Award.

Currently, we have a PhD candidate, a Master of Surgery student and six keen medical students working with us on an ever-increasing number of projects.
World-First Simulation Patient Safety Research at Peninsula Health

Peninsula Health has partnered with Monash University and Monash Health to conduct world-first research into the impact of providing simulation-based falls prevention training to undergraduate health professionals.

“Accidental falls are one of the most common and costly threats to patient safety in healthcare institutions,” said Peninsula Health’s researcher, Dr Cylie Williams, Community Health Research and Evaluation Coordinator. “By conducting this research, we hope to find a cost-effective way to reduce the incidence of falls in hospitals.”

“We are also planning to undertake an economic analysis of the real costs of simulation education using simulated patients (actors) and falls prevention strategies within the hospital setting. Economic analysis of simulation is rarely reported within research, this will allow us to demonstrate the...
relevance across a broad range of health and education settings.”
This research is funded by the Department of Health and Human Services and was driven by the need to evaluate patient outcomes from simulation training. Undergraduate health professionals are ideally suited to participate in the study. “Students generally have more time to talk to patients while they’re on wards and they will already have participated in other simulation-based education, so it makes sense to incorporate falls prevention communication into their training,” says Cylie.

The idea to conduct the study came from research undertaken by the Australian and New Zealand Falls Prevention Society. “They found that the theory of falls prevention isn’t often taught at an undergraduate level or if it is, it’s at a very limited level with a lot of non-evidence based or old-evidence based interventions. Patient centred education strategies are often practiced with a peer in the classroom, which is very different from real situations”.

This research will focus on inter-professional simulation training to enable better cohesion between health professionals. To date, over 100 medical, nursing and allied health students have undertaken the training and this research is planned to continue until July 2016.

Undergraduate students aren’t the only focus within Peninsula Health Community Health and Allied Health. Cylie supervises a number of students undertaking their undergraduate degree with honours, Masters by Research students and PhD candidates at Peninsula Health and other healthcare services. “Working with clinician researchers is exciting, seeing questions arise from clinical need or frustration, leads to projects that quickly make a
difference in our communities and patients’ health. Rapid knowledge translation is important and when clinicians drive this it improves the rapid uptake of new evidence into practice.”

One of Cylie’s student’s projects includes the largest randomised comparative efficacy trial undertaken in the treatment of paediatric heel pain (calcaneal apophysitis) (Alicia James). These findings will guide podiatrists and physiotherapists in the treatment of this common condition. Other research student projects include understanding how best to deliver foot health-related diabetes education (Julia Yuncken), and a collaborative project into the use of new technology for wound healing (Monash Health, Lucia Michailidis) undertaken here at Peninsula Health and at Monash Health.
A family member with Parkinson’s disease has inspired physiotherapist Fleur Terrens to investigate how aquatic physiotherapy might help those with this condition. Parkinson’s disease, a progressive neurological condition, is the most common movement disorder, affecting more than 50,000 people in Australia.

“There are only around 10 aquatic physiotherapy trials worldwide that specifically look at Parkinson’s disease,” says Fleur. “It’s a very new area of research.

“We want to understand whether traditional aquatic exercise and movement is more effective at improving balance and gait than rotational aquatic exercise in people with Parkinson’s disease.”

Fleur is the principal investigator in a research project entitled ‘Falls and Balance in Parkinson’s Disease: Traditional Versus Novel Aquatic Physiotherapy.’ Wendy Toogood and Associate Professor Prue Morgan, Head of the Department of Physiotherapy, Monash University are the project’s associate investigators.

Both aquatic and land-based physiotherapy are currently used in the treatment of patients with Parkinson’s disease within Peninsula Health’s Movement Disorders Program.

Movement disorders are neurological conditions that affect the speed, fluency, quality, and ease of movement and may involve
excessive or involuntary movement or slowed or absent voluntary movement. People with Parkinson’s disease do not have very good core strength, and around 70% of people with the condition have fallen.

As the likelihood of injury from falls is high, physiotherapy treatment is directed towards improving balance. For many years treatment has been land-based only, focusing on movement strategy training for a patient’s motor symptoms.

Previous studies have found that there is moderate to high-quality evidence to support aquatic physiotherapy in a wide range of conditions but evidence to date does not confirm how best to use aquatic physiotherapy in patients with Parkinson’s disease, explains Fleur.

This research project is comparing physiotherapy treatments for Parkinson’s disease and will compare two different aquatic physiotherapy exercises.

The purpose of this research is to determine if there are changes in a patient’s function (for example balance and falling) after completing different aquatic exercises. It also aims to examine how people feel about aquatic physiotherapy. “It is known that physiotherapy and exercise programs are beneficial in a number of ways for people with Parkinson’s disease and this research will expand on this and help guide future decisions in the Movement Disorders Program related to Physiotherapy services,” says Fleur.

This research will be used to gain a Masters of Philosophy qualification through Monash University.

“My study aims to add to the knowledge regarding the efficacy of this treatment modality to optimise balance and subsequently decrease falls in people with Parkinson’s disease,” says Fleur.
Radiography Skills: an Untapped Asset for Emergency Departments

In most Australian hospitals, when you attend an emergency department with a fractured arm or leg, you are triaged by the nurse and then seen by a doctor. The doctor may recommend an x-ray. Radiologists are not usually available after-hours to report on x-rays of extremity trauma and assessment is made by the treating doctor.
A research project at Peninsula Health is examining the accuracy of radiographers’ comments on extremity trauma x-rays.

“This study could serve as a future model for ‘radiographer trauma comment’ in Australia where no formal pathway currently exists to expedite x-ray review and similar trials have not been documented,” says the research project’s principal investigator, Beverley Pearce, a clinical educator at Peninsula Health’s Medical Imaging Department.

Beverley is leading a research project entitled ‘Radiographer comment in extremity trauma; research to examine accuracy and implications of use in the changing professional role’. Ryan Turnbull, Tutor Radiographer is the co-researcher.

The purpose of this research was to establish the diagnostic accuracy of radiographers’ comments on extremity trauma imaging before and after a targeted educational program and then to consider the implications of this with regard to the role extension of the radiographer, with particular reference to patient care and management within the Emergency Department.

A radiographic extremity trauma workshop was attended by 12 radiographers followed by a further 16 weeks of documenting radiographer comments.

“The accuracy of the radiographer’s recorded comment was compared to the radiologist’s report, which is considered to be the gold standard, in each case,” Beverley explains.

Evidence shows that, with appropriate education and training, the accuracy of radiographers in interpreting plain x-rays is comparable to that of radiologists.

Worldwide, the role of radiographers extends into responsibilities traditionally considered to be within the scope of radiologists, whilst varying pathways of categorisation of the Advance Practitioner (radiographer) role exist within the fields of oncology, mammography, conventional imaging in emergency and primary care fluoroscopy, ultrasound and MRI.

“The diagnostic opinion of extremity trauma imaging in the emergency department out-of-hours, in the rural setting or in sole radiographer practice, is frequently sought when a radiologist report is not immediately available,” says Beverley.

“Within Peninsula Health, extremity reports are not usually available after hours; there are currently no practising Advanced Practice Radiographers providing a comment to referrers out-of-hours in Australia.”

According to Beverley, the research also suggests that Australian Radiographers with four years’ postgraduate clinical experience can, following targeted education, demonstrate an accuracy of 95.26%, and they are able to provide an accurate comment on extremity trauma in emergency department patients. This is comparable to current UK and US studies.
Peninsula Health Joins Global Intravenous Catheter Research Project

Peninsula Health has joined the worldwide ‘One Million Global catheters: PIVC study’ (OMG) and is using the results to improve local patient outcomes.

A peripheral intravenous vascular catheter (PIVC) is a vascular access device used to provide intravenous fluids and medications directly into a vein. With almost a billion PIVCs inserted around the world each year, PIVCs are associated with inflammation, infection, and device failure.1

It is estimated that approximately half of all patients admitted to hospital require the insertion of an intravenous cannula into a peripheral vein, usually in the hand or arm, for the administration of intravenous fluids, medications, and blood products. It is the most common invasive clinical procedure performed in hospitals worldwide.

“The study, the first of its kind, is investigating the use and management of PIVCs in adult and paediatric hospital inpatients in over 50 countries,” explains Peninsula Health’s Hospital in the Home Nurse Unit Manager, Lisa Whittle.

Lisa, an Associate Investigator on the project, says the study will have international significance in providing a snapshot of the prevalence of PIVC use and its complications.

“As an international benchmarking exercise, this study will provide much needed data that can be immediately translated into clinical practice through targeted infection prevention and education programs, quality improvement initiatives and interventional studies all aimed to minimise the burden of adverse patient outcomes related to PIVC care,” explains Lisa.

Peninsula Health established a team led by Joan Thomas, Nurse Unit Manager, Oncology Day and Research Unit to collect data from 179 patients at Frankston Hospital. The data and information collected will now be used to improve PIVC policies and processes.

As at July 2015 the OMG project had collected data from 409 hospitals in 49 countries. Data have been collected in 15 languages and an estimated 65,000 patients have been screened. The data collection has ended and the analysis phase is to commence soon.

The Peninsula Health OMG team includes: Nurse Unit Manager Oncology Day and Research Unit, and Principal Investigator, Joan Thomas; Nurse Unit Manager Hospital in the Home and Associate Investigator, Lisa Whittle; Data Manager, Tanya Ainsworth; Data Collector Breena George, Research Nurse and Trial Coordinator, Jodie Wainwright, and Ethics Submission Specialist, Lynda Hopkins.

2Ibid.
3Ibid.
Researchers Examine Ancient Drug to Fight Cardiovascular Disease
Peninsula Health Cardiologist Associate Professor Jamie Layland together with researchers from St Vincent’s Hospital is leading a study investigating the use of common anti-inflammatory medication to reduce major adverse cardiac events and improve health-related quality of life for patients who present with acute coronary syndromes (ACS).

“Cardiovascular disease is the leading cause of mortality and morbidity globally,” says Jamie.

Despite recent advances in medical therapy and high percutaneous coronary intervention success rates, long-term mortality and cardiac event rates remain high in patients presenting with acute coronary syndromes (ACS), he explains.

“Over the last decade, it has become apparent that inflammation plays a pivotal role in all stages of atherosclerosis,” says Jamie.

“Amidst various anti-inflammatory therapies, colchicine has emerged as a promising therapeutic option for cardiovascular disease due to its strong anti-inflammatory properties.

“But to date, no large studies have been performed to determine the effect of colchicine on long-term cardiovascular outcomes in patients with ACS.”

Colchicine is a natural and ancient drug, which has been used widely for the treatment of inflammatory conditions such as acute gout, familial Mediterranean fever (FMF) and pericarditis. The ancient Greeks used colchicine as a powerful purgative more than 2000 years ago.

It is believed that the inflammatory-modulating effects of colchicine are due to the disruption of microtubules – the important filamentous intracellular structures that are involved in cell division, signal transduction, regulation of gene expression, migration and secretion.

Jamie’s research team will seek to evaluate the effects of low-dose colchicine on long-term cardiovascular outcomes in patients with ACS treated medically and/or with percutaneous coronary intervention.

“We expect that the addition of colchicine to standard secondary prevention therapy may reduce major adverse cardiac events and improve health-related quality of life at 12 months in patients presenting with ACS,” says Jamie.

The research team will recruit participants from a number of sites across Australia, including Frankston Hospital.
First Study to Examine the Benefits of Client Involvement in Mental Health Nursing Handovers

It is well documented in the literature that involving patients/clients in their clinical handover empowers them and ultimately improves care, and while this is common practice in many nursing areas, this is the first study to explore its effectiveness within the mental health settings.

Peninsula Health and Monash University researchers, with funding from the Department of Health and Human Services are undertaking a study to examine the effectiveness of client involvement in the nursing handover process in the Adult Acute Mental Health Inpatient Unit at Frankston Hospital.

Evidence from literature has indicated that a large proportion of adverse events have been attributed to miscommunication during the handover process.

“The ‘Nursing Handover Involving Clients’ (NHIC) study aims to establish guidelines to inform nursing handover and enhance quality and safety of care outcomes as well as ensuring the client has a feeling of inclusion in the process at the Adult Acute Mental Health Inpatient Unit,” says Dr Michael Olasoji, a nurse from the Adult Acute Mental Health Inpatient Unit at Peninsula Health and a researcher from Monash University.

The mixed methods study is being conducted in three phases. There will be two groups of participants.
involved in the study; mental health clients and mental health nurses on the inpatient unit. It will include a pre and post implementation anonymous survey and focus group interviews with mental health nurses working at the unit and a pre and post implementation focus group with clients.

The project also aims to inform the development of a statewide clinical practice guideline on mental health nursing handover and a training package which can be used by mental health facilities across Victoria.

Dr Olasoji, the project’s principal investigator, explains that the clinical handover is an essential part of the nursing care delivery process and client safety in the mental health inpatient units. During this process, there is a transfer of information and also responsibility and accountability for client care from one healthcare professional, or team of professionals to another.

When clients have input related to their care there is a reduced risk of fragmentation of care, miscommunication-related adverse events and a greater likelihood of continuity of care.

“However the practice of client involvement in handover has not been embraced in the mental health setting for a range of reasons, about which there is little evidence,” says Michael.

The Adult Acute Mental Health Inpatient Unit as part of its service delivery and ongoing move towards recovery oriented practice will be establishing a new client-centred nursing handover system. Under this new system, greater emphasis will be placed on ensuring that clients are involved during the change of nursing shift handover.

Pictured above are Peninsula Health members of the research team left to right are Sini Jacob (Clinical Practice Improvement Coordinator), Dr Michael Olasoji, and Liam Shaw (Nurse Unit Manager). Other research team members from Peninsula Health include: Fiona Reed (Chief Nursing Officer), Michelle Shanti (Consumer Consultant); from Peninsula Health and Monash University, Associate Professor Virginia Plummer (Associate Professor Nursing Research); and Professor Wendy Cross (Head of School of Nursing & Midwifery, Monash University).
Assessing the Management of Humeral Shaft Fractures

Dr Frances Harkin, lead researcher and Hospital Medical Officer at Peninsula Health
The Orthopaedic Surgery Unit at Peninsula Health in its quest to improve patient outcomes is interested in examining the results of accepted practice treatments. One recent project analysed data on humeral shaft fractures with the aim of improving how these fractures are managed.

Humeral shaft fractures most commonly occur in active young men in their 30s or women in their 70s suffering from osteoporosis. Around 60% of humerus fractures occur in the middle third of the bone.

“For decades humeral shaft fractures have been managed conservatively, that is, in a Sarmiento brace, says Dr Frances Harkin, lead researcher and Hospital Medical Officer at Peninsula Health.

“We would use operative fixation in multi-trauma cases, if the fracture was open, or if it needed exploration.

“We’ve had two recent cases where patients were managed conservatively, but the fracture ends broke through the skin [what we call development of an open fracture].”

This prompted the researchers to look at the risks of surgical versus conservative management, and also what factors might have made these people more at risk of failing conservative management.

Supervised by Mr Richard Large (Consultant Orthopaedic Surgeon), Frances and her team which included medical students from Monash University, undertook a retrospective cohort study of all humeral shaft fractures seen through Frankston Hospital in 2014.

They collected data on medication and past medical history, fracture type and location, injury details, intervention and outcomes. Statistical analysis of co-variates was performed to identify factors associated with non-union.

This small study showed higher than expected rates of non-union in conservatively managed humeral shaft fractures, however the researchers plan to extend the study in 2016 to examine the outcomes of humeral fractures in a larger group of patients.

Humeral shaft fractures are a frequent injury which usually results in a great impairment for the patient. People whose capacity to live independently at home was tenuous before injury, can often be temporarily or permanently in care because of a dominant arm injury.

Therefore an operation which can offer an earlier return of the use of the whole arm rather than it being immobilised in a sling for weeks or months is attractive. However an operation can also come at great risk to a patient. Prolonged anaesthetics, infections involving bacteria with ever-increasing antibiotic resistance are two strong reasons not to operate. But as a health service we also have to consider the opportunity cost that treating most humeral fractures with an operation would restrict our care to other individuals in need.

“A balance needs to be found, where we can justify an operation - to the patient, to the surgical team and to the hospital,” said Mr Richard Large on behalf of the Orthopaedic Unit at Frankston Hospital.
Members of Research Committees 2014/15

The Human Research Ethics Committee considers and advises the Board of Directors on all ethical matters arising from research activity. It monitors ongoing research through the review of regular reports at a frequency corresponding to the risk to participants.

Dr Laurie Warfe  
Board Director (Chair)  
Professor Henry Ekert AM  
Board Director (Deputy Chair)  
Dr Susannah Ahern  
Executive Sponsor  
Dr Fergus Kerr  
Executive Sponsor  
Professor John Botha  
Director of Research  
Dr Stephen Bright  
Healthcare Professional

Ms Jan deClifford  
Senior Pharmacist  
Ms Julie Grant  
Healthcare Professional  
Associate Professor Debra Griffiths  
Researcher  
Dr Dilnie Herbert  
Ethicist  
Ms Alice Irving  
Laywoman  
Mr Richard Ivce  
Layman  
Associate Professor Terry Loughnan  
Researcher  
Associate Professor Virginia Plummer  
Researcher  
Mr Adrian Stone  
Lawyer  
Associate Professor Ravi Tiruvoipati  
Researcher  
Dr Ashley Webb  
Researcher  
Dr Cylie Williams  
Researcher

Associate Professor Virginia Plummer  
Associate Professor  
Nursing Research (Chair)  
Mr Nigel Broughton  
Deputy Director of Research  
Director of Orthopaedic Research  
Mr Sean Chinnathumby  
Clinical Research Nurse  
Ms Lee-Anne Clavarino  
Manager Research Program

Associate Professor Jamie Layland  
Cardiologist  
Ms Alison Lunt  
Occupational Therapist  
Dr Mainak Majumdar  
Intensivist (Donate Life)  
Dr George Miller  
Registrar – Plastic Surgery  
Associate Professor Warren Rozen  
Plastic Surgeon  
Mr Michael Wang  
Physiotherapist  
Ms Sharon White  
Operations Director / Principal Nurse – Emergency Services and Women’s Children’s and Adolescent Health

Associate Professor Ernie Butler  
Head of Neurology  
Associate Professor Miodrag Dodic  
Year 4c and Research Coordinator  
Peninsula Clinical School

Dr Sam Leong  
Consultant Anaesthetist  
Associate Professor Virginia Plummer  
Associate Professor Nursing Research  
Dr Cylie Williams  
Research and Evaluation Coordinator  
Community Health
Projects Considered by the Human Research Ethics Committee

Colorectal database.  
PI: Mr Stewart Skinner

The Chronic Heart Failure Tele-Health Model of Care study.  
PI: Iain Edwards

Stigmatisation and community fall prevention – The next step in housing modification for elderly Australians.  
PI: Michael Lo Bianco

‘Home is where the heart is’: A qualitative study on the experiences of patients and carers through the Stroke Detours Program.  
PI: Allison Hocking

A pilot study assessing the comfort, cost and durability of 3D printed shoe fillers for people who have undergone toe or transmetatarsal amputations.  
PI: Dr Cylie Williams

CarePoint integrated care program.  
PI: Dr Georgia Karabatos, Professor Bob Thomas, and Dr Neil Soderlund

Cognitive behaviour therapy for older adults experiencing insomnia and depression in a community mental health setting: A randomised controlled trial.  
PI: Paul Sadler

A pre-market study evaluating the Prodigy™ Neuromodulation System for the management of failed back surgery syndrome or chronic intractable pain of the trunk and/or limbs.  
PI: Dr Murray Taverner

Activity and pain in spinal cord stimulator patients.  
PI: Dr Murray Taverner

Non-invasive validation of the instantaneous wave free ratio (iFR) in patients with stable angina: The NIVEA study.  
PI: Associate Professor Jamie Layland

Projects Approved to Commence at Peninsula Health Reviewed Through the Streamlined Ethical Review System in Victoria or National Mutual Acceptance

A phase 3, randomised, double-blind, placebo-controlled study evaluating the efficacy and safety of idelalisib in combination with bendamustine and rituximab for previously untreated chronic lymphocytic leukemia.  
PI: Associate Professor John Catalano

A phase 3 efficacy and safety study of ALKS 5461 for the adjunctive treatment of major depressive disorder (the FORWARD-4 study).  
PI: Dr Jennifer Grunfeld

A phase III, 52 week, randomised, double-blind, 3-arm parallel group study, comparing the efficacy, safety and tolerability of the fixed dose triple combination with the fixed dose dual combinations of FF/VI and UMEC/VI, all administered once-daily in the morning via a dry powder inhaler in subjects with chronic obstructive pulmonary disease.  
PI: Associate Professor David Langton

Safety and efficacy of a lysophosphatidic acid receptor antagonist in idiopathic pulmonary fibrosis.  
PI: Associate Professor David Langton

Identification and characterization of molecular and clinical profiles, and outcomes in subjects with MET-amplified cancers.  
PI: Dr Vinod Ganju

Adding mitomycin C to BCG as adjuvant intravesical therapy for high-risk, non-muscle invasive bladder cancer: A randomised phase 3 trial.  
PI: Dr Emma Beardsley

A multicentre, randomised, double-blind, parallel group, placebo controlled, phase III efficacy and safety study of benralizumab (MEDI-563) added to high-dose inhaled corticosteroid plus long-acting β2 agonist in patients with uncontrolled asthma (SIROCCO).  
PI: Associate Professor David Langton

Note: All projects titles have been listed as submitted by the Sponsor or Principal Investigator.  
PI = Principal Investigator
PI: Dr Sachin Gupta

A phase 3 multicentre study of the long-term safety and tolerability of ALKS 5461 for the adjunctive treatment of major depressive disorder in adults who have an inadequate response to antidepressant therapy (the FORWARD-2 study).
PI: Dr Jennifer Grunfeld

A randomised double blind, double–dummy parallel group study to compare the efficacy and safety of fluticasone propionate / formoterol fumarate (Flutiform) 500/20 mcg BID and 250/10 mcg BID versus salmeterol / fluticasone (Seretide) 50/500 mcg BID in subjects with COPD.
PI: Associate Professor David Langton

Open–label extension study to evaluate the long-term safety and tolerability of dupilumab in patients with asthma who participated in previous dupilumab asthma clinical study.
PI: Associate Professor David Langton

A multicenter phase 3 randomized, open-label study of bosutinib versus imatinib in adult patients with newly diagnosed chronic phase chronic myelogenous leukemia.
PI: Associate Professor John Catalano

A multicentre randomised phase II trial comparing nab-paclitaxel to paclitaxel in patients with advanced urothelial cancer progressing on or after a platinum containing regimen.
PI: Dr Emma Beardsley

PI: Mr Wai-Leng Chue

Phase 3 randomised, double-blind, placebo controlled, multicenter study to compare the efficacy and safety of lenalidomide (CC-5013) plus r-chop chemotherapy (R2-CHOP) versus placebo plus R-CHOP chemotherapy in subjects with previously untreated activated B-Cell type diffuse large B-Cell lymphoma.
PI: Associate Professor John Catalano

A phase 3, randomised, placebo-controlled, double-blind study of oral ixazomib maintenance therapy after initial therapy in patients with newly diagnosed multiple myeloma not treated with stem cell transplantation.
PI: Associate Professor John Catalano

Open-label study to assess the long-term safety and efficacy of momelotinib in subjects with primary myelofibrosis, post-polycythemia vera myelofibrosis, post-essential thrombocythemia myelofibrosis, polycythemia vera or essential thrombocythemia.
PI: Associate Professor John Catalano

Sedation for acute agitation in emergency department patients: Targeting adverse events.
PI: Associate Professor Pam Rosengarten

Serum activin, gene expression, muscle mass and function in people with critical illness: An observational cohort study.
PI: Michael Wang

An open label, multi-center, phase IV roll-over protocol for patients who have completed a prior global Novartis or Incyte sponsored ruxolitinib (INC424) study and are judged by the investigator to benefit from continued treatment.
PI: Associate Professor John Catalano

A phase III, open-label, randomised study of MPDL3280A (Anti−PD-L1 antibody) in combination with carboplatin + paclitaxel with or without bevacizumab compared with carboplatin + paclitaxel + bevacizumab in chemotherapy-naive patients with stage IV non-squamous non–small cell lung cancer.
PI: Dr Nicole Potasz

A phase 3, multi-center, randomised, double-blind, placebo-controlled, study of fostamatinib disodium in the treatment of persistent/chronic immune thrombocytopenic purpura.
PI: Dr Huy Tran

A phase 3 open label extension study of fostamatinib disodium in the treatment of persistent/chronic immune thrombocytopenic purpura.
PI: Dr Huy Tran

A phase III, open-label, multicentre, randomised study evaluating the efficacy and safety of MPDL3280A (Anti-PD-L1 antibody) in combination with carboplatin + paclitaxel or MPDL3280A in combination with carboplatin + nab-paclitaxel versus carboplatin + nab-paclitaxel in chemotherapy naive patients with stage IV squamous non–small cell lung cancer.
PI: Dr Nicole Potasz

Shifting the focus: Prevalence and predictors of psychological wellbeing of carers of children with type 1 diabetes.
PI: Francesca Thomson

Preparing families for treatment withdrawal: Focus groups.
PI: Dr Melissa Bloomer
# Projects Considered by the Low Risk Research Subcommittee

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Principal Investigator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The effect of eccentric positioning of a tibial tunnel interference screw in ACL reconstruction.</td>
<td>Dr Julia Kirby and Dr John Swan</td>
</tr>
<tr>
<td>Exploring issues influencing the use of the Falls Risk Assessment tool (FRAT) by nurses in the acute setting at Peninsula Health.</td>
<td>Karen Edis and Vicki Davies</td>
</tr>
<tr>
<td>Use, prioritisation and decision-making associated with the allocation of single patient rooms: A scoping study.</td>
<td>Dr Melissa Bloomer</td>
</tr>
<tr>
<td>Mapping Advance Care Planning documentation practices in residential aged care facilities.</td>
<td>Alice Urban</td>
</tr>
<tr>
<td>Mapping staff and patient experiences and outcomes following the cancer rehabilitation program.</td>
<td>Koki Miyazaki</td>
</tr>
<tr>
<td>Mental health assessment in the Emergency Department: Clinician experiences of NEAT on psychiatric risk assessment.</td>
<td>Euan Donley</td>
</tr>
<tr>
<td>Pressure injury prevention and management provision of support surfaces at Rosebud Hospital.</td>
<td>Alison Lunt</td>
</tr>
<tr>
<td>New errors in electronic medication management systems: NEEIMS project.</td>
<td>Jan de Clifford</td>
</tr>
<tr>
<td>Does it matter who orders a sleep study: Outcomes of open access GP referrals for sleep studies in a public hospital sleep laboratory.</td>
<td>Associate Professor David Langton</td>
</tr>
<tr>
<td>Consumer attitudes to Advance Statements and Nominated Person in a public mental health service with the implementation of The Mental Health Act 2014.</td>
<td>Associate Professor Sean Jespersen</td>
</tr>
<tr>
<td>Hip and knee exercise group as an adjunct therapy to knee joint replacement outpatient rehabilitation to reduce waiting lists and increase cost efficiency.</td>
<td>Nikita Sundarjee</td>
</tr>
<tr>
<td>3D printing of CT/MRI scans of bones and soft tissue: Validation study.</td>
<td>Associate Professor Warren Rozen</td>
</tr>
<tr>
<td>An investigation into radiographer practitioner skill development for preliminary diagnosis accuracy in extremities trauma.</td>
<td>Beverley Pearce</td>
</tr>
<tr>
<td>Implementing a whole-of-service approach to managing clients in crisis.</td>
<td>Alanna Ritchie</td>
</tr>
<tr>
<td>Analysis and reporting of the ED trauma informed care education trials.</td>
<td>Professor Brian McKenna</td>
</tr>
<tr>
<td>Understanding the use of restrictive interventions in mental health consumers presenting to the ED.</td>
<td>Professor Brian McKenna</td>
</tr>
<tr>
<td>Understanding the barriers and enablers to the provision of brief intervention in smoking cessation within Community Health.</td>
<td>Dr Cylie Williams</td>
</tr>
<tr>
<td>Understanding the research capacity and culture of the Southern Metropolitan Region public dental workforce.</td>
<td>Dr Cylie Williams</td>
</tr>
<tr>
<td>One million global peripheral intravenous catheters study (OMG).</td>
<td>Joan Thomas</td>
</tr>
<tr>
<td>Why do people with COPD repeat pulmonary rehabilitation?</td>
<td>Shannon Anastasio</td>
</tr>
<tr>
<td>Exploring attitudes towards prognostication by intensivists for their patients compared to self and next of kin.</td>
<td>Dr Sachin Gupta</td>
</tr>
<tr>
<td>Investigation of decision-making processes during airway management - Observations and brief interviews.</td>
<td>Dr Stuart Marshall</td>
</tr>
<tr>
<td>Investigation of decision-making processes during airway management - In-depth interviews.</td>
<td>Dr Stuart Marshall</td>
</tr>
<tr>
<td>The outcomes of patients presenting to non-CABG hospitals requiring inpatient surgical treatment.</td>
<td>Dr Geoff Toogood</td>
</tr>
<tr>
<td>Functional outcomes and radiological evaluation of Lafosse proximal biceps Y-tenodesis.</td>
<td>Mr Richard Large</td>
</tr>
<tr>
<td>Emergency nurses’ perceptions of Emergency Department preparedness for an Ebola outbreak: A qualitative description.</td>
<td>Associate Professor Cheryle Moss</td>
</tr>
<tr>
<td>Exploring the scope and roles of staff within the HARP Services.</td>
<td>Mia Janssen</td>
</tr>
<tr>
<td>Establishing the effectiveness, cost-effectiveness and student experience of simulation training for the prevention of falls amongst hospitalised inpatients.</td>
<td>Dr Cylie Williams</td>
</tr>
<tr>
<td>Bronchial thermoplasty global registry.</td>
<td>Associate Professor David Langton</td>
</tr>
<tr>
<td>The effectiveness of client involvement in nursing handover on an Australian mental health inpatient unit.</td>
<td>Dr Michael Olasoji and Ms Fiona Reed</td>
</tr>
</tbody>
</table>
Quality Assurance Projects Approved by Executive Sponsor Research

International Nutrition Survey.

Estimating unrealised potential for tissue and eye donation from deaths due to hypoxic brain injuries at Frankston Hospital.

Comparison of serious medication errors in an Australian public hospital system before and after implementation of a computerised medication management system.

The cost of delayed Medical Emergency Team activation.

Introduction of an evidence-based protocol for the conservative management of renal stones in an emergency department and its impact on hospital-related admissions and costs.

Is there an increased incidence of complicated peptic ulcer disease at Peninsula Health when compared to Australian data?

Clinical guidelines to improve care for children and young people at Peninsula Health.

Methods of induction of labour and birthing outcomes in an Australian public maternity service.

A retrospective study assessing the length of time a pregnancy can safely continue after pre-labour rupture of membranes.

Postoperative MET calls: Incidence, reason for calls and outcome.

Compliance and outcome in a virtual clinic for long term follow-up of patients after hip and knee replacement.

Contraindications to thrombolysis in stroke.

Endoleaks after endovascular aortic aneurysm repair, the Frankston experience.

Prospective outcome audit of bronchial thermoplasty.

Review of dysphagia screening for patients admitted with acute stroke.

Department of Health advanced musculoskeletal physiotherapy implementation plan. Assessing the burden of necrotising pancreatitis.

Malnutrition Point Prevalence Survey.

Analysis of time to care audits for CLIPS clinician in the ED.

Retrospective single-centre study to assess the outcomes of patients admitted to Frankston Hospital Intensive Care Unit for targeted temperature management following non-traumatic cardiac arrest.

Guillain-Barré syndrome: An experience from an Australian tertiary level hospital – a retrospective study.

Barriers for timely discharge from the Adult Acute Inpatient Mental Health Ward.

Follow up of total hip and knee arthroplasties within the first year.

Smoke-Free Workplace Policy: The results of the Smoke-Free Survey with Peninsula Health staff.

Audit of the frequency of drug combinations with the potential to cause serotonin toxicity in a metropolitan hospital.

Audit of physiotherapy outcome measures used and clinical outcomes for sub-acute inpatients post total hip and knee arthroplasty participating in land and aquatic physiotherapy.

Improving perioperative smoking cessation: Documentation of smoking status, brief advice and cessation support one year after ANZCA PS12 Guideline.

A retrospective review of patients greater than 85 years of age attending the Peninsula Health emergency departments.

The efficacy of the Vancouver classification in the treatment of periprosthetic fractures.

Epidemiology of patients admitted to a metropolitan ICU following acute drug overdose.

Gender differences in the vascular anatomy in the supraclavicular artery island flap.

Evaluation of the incontinence post stroke pathway for community rehabilitation program.

Blood transfusions in emergency general surgery: Are they always indicated?

Significance of incidental findings of colitis on CT abdomen in the inpatient setting.

Review of Advance Statements content in a public mental health hospital since the implementation of the new Victorian Mental Health Act of 2014.

Measurement of proximal humeral cortical thickness to proximal humeral diaphyseal width ratio as a predictor of bone mineral density.

Factors affecting osteosynthesis in fracture of the surgical neck of humerus.

Prospective study assessing echocardiography delivery rates at Peninsula Health - Frankston Hospital.

Implementation of a multidisciplinary stroke mood screening and support pathway for inpatient rehabilitation.

Evaluation of the Peninsula Health Youth Prevention and Recovery Care Service.

Humeral shaft fractures - factors correlated with non-union.
Grants

Williams, C., Haines, T., Bowles, K., Nestel, D., Maloney, S., Kiegaldie, D., Establishing the effectiveness, cost-effectiveness and student experience of simulation training for the prevention of falls amongst hospitalised inpatients, *Department of Health and Human Services Simulation Patient Safety Research Project funding*, $200,000

Celebrating Research 2014

Celebrating Research is an annual event that celebrates and showcases research at Peninsula Health. Events include research prizes for allied health, nursing, junior medical staff and students; a poster competition and Jeremy Anderson Oration.

Jeremy Anderson Orator
Professor Ruth Endacott
Professor in Clinical Nursing (Critical Care), Plymouth University (UK)
Professor of Clinical Nursing, Monash University

Research Prize Winners

**Allied Health**
First: Laura de Lange
Occupational therapy evidence-based practice guidelines for bariatric home modification prescription.

Second: Matthew Van Wees
Prasugrel in Percutaneous Coronary Intervention (PPCI) post-marketing single centre experience.

**Interprofessional**
First: Erin Farnbach
Food security issues on the Mornington Peninsula - a reality!

Second: Dr Sandeep Prabhu
4F angiography is associated with less contrast usage, shorter procedure time and earlier discharge with preserved diagnostic utility - A comparison with 5F angiography.

**Nursing**
First: Rebecca Thompson

Second: John Stewart
A survey of the quality of sleep among non-mechanically ventilated patients admitted to the Intensive Care Unit: A pilot study.

**Registrar**
First: Dr Nicole Gaffney
Does it matter who orders a sleep study?: Outcomes of open access GP referral for sleep studies in a public hospital.

Second: Mr Warren Rozen
3D “reverse” modelling for preoperative planning in plastic and reconstructive surgery.

Third: Dr Reny Suryani
Adherence rate to guideline directed therapy in patients with systolic heart failure.

Special Award: Dr Michael Chae
3D volumetric analysis in breast reconstructive surgery.

**Student**
First: Nelson Wang
Paediatric Clinical Network – Clinical practice improvement in the treatment of bronchiolitis.

Second: Frances Harkin
The perinatal risks of macrosomia - an audit of macrosomic and normosomic neonates born at Frankston Hospital.

Scientific Poster Prize Winners

**Allied Health**
First: Sarah Chao, Jan deClifford, Skip Lam, Dr Aisling Griffin
Evaluating impact of Cerner Millennium™ electronic prescribing system on prescribing error rates in subacute inpatients.

Second: Emma Greer, Fiona, Turnbull, Ana Hughes, Lina Wang, Richard Dove
A retrospective audit of the dietetic care and follow up of patients presenting to Peninsula Health with a fractured neck of femur.

**Interprofessional**
First: Sue Reaper, Cameron Green, A/Prof Ravi Tiruvoipati, Dr Sachin Gupta
Development and validation of a scale for the assessment of pressure injuries in the mouth and oral mucosa. The Reaper Oral Mucosa Pressure Injury Scale (ROMPIS).

Second: Dr Sandeep Prabhu, Marcus Arrowsmith, Dr Mark Freilich
4F angiography is associated with less contrast usage, shorter procedure time and earlier discharge with preserved diagnostic utility – A comparison with 5F angiography.

**Medicine**
First: Dr Dylan Rajeswaran, Dr Ashley Webb
The effect of smoking, anxiety and depression on post-operative pain

Second: Frances Harkin, Dr Kathy McMahon
The perinatal risks of macrosomia - an audit of macrosomic and normosomic neonates born at Frankston Hospital.

**Nursing**
First: Jodi Vuat, Jo Sanders
Discussing the finer detail of organ donation.

Second: Dr Melissa Bloomer, Dr Susan Lee, A/Prof Cherylle Moss, Dr Mary Anne Biro, David Lewis
A snapshot of single room usage in an Australian public hospital.
Peninsula Health’s Research Report 2015 focuses on the achievements and contributions of staff involved in research. For a broader picture of Peninsula Health’s activities over the past year, please see our other annual publications.


> **Quality of Care Report 2015** – highlights Peninsula Health’s progress and achievements in improving clinical care and our consumers’ experience.

For further information about Peninsula Health or to download our annual publications, please visit our website, www.peninsulahealth.org.au.

**Acknowledgements**

Peninsula Health acknowledges the contribution made by all staff involved in research. The Research Report 2015 showcases a small number of these projects but recognises the many ongoing projects and commercially sponsored, collaborative group and investigator-initiated trials in departments such as Anaesthesia, Cardiology, Cancer Services, Community Health, Emergency Medicine, Intensive Care, Mental Health and Thoracic Medicine that have the potential to improve the care we offer our patients.

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We acknowledge and pay respect to the traditional people of this region, known as the Myone Buluk of the Boon Wurrung language group of the greater Kulin Nation. We pay our respects to the land this organisation stands on today. We bestow the same courtesy to all other First Peoples, past and present, who now reside in this region.