Uptake of poly-arginine peptide-18-FITC (green) into cultured cortical neurons; nuclei (blue) stained with DAPI.

Bruno Meloni

Research Photo Competition
Acute pneumonia
Matthew Anstey
ICU Consultant
“How can we not just help you survive critical illness, but return you to a meaningful quality of life?”

Esophagus-stomach: mucin stains of barrett’s mucosa
High-power magnification shows the blue-staining goblet and columnar cells.
Executive Director

Thank you for reading the Sir Charles Gairdner Osborne Park Health Care Group Research Report, Summer 2018/19. Sir Charles Gairdner Osborne Park Health Care Group (SCGOPHCG) has a national and international reputation for ground-breaking research and is the largest public sector research hospital in Western Australia.

The SCGOPHCG is home to highly acclaimed researchers in a number of fields and undertakes a wide range of translational research and clinical trials. Sir Charles Gairdner Hospital also has exceptionally strong links to all major WA universities including the University of Western Australia, Edith Cowan University, Curtin University, and the University of Notre Dame Australia as well as The Harry Perkins Institute of Medical Research.

This report reflects professional commitment of the SCGOPHCG Department of Research in supporting researchers and fostering a culture of enquiry. This celebration of the work of our researchers reflects the quality outcomes from the Department of Research.

Director of Research

This is the first report of a new series of annual reports from the Sir Charles Gairdner Hospital Department of Research.

The report provides a snapshot of the depth and breadth of research undertaken across the site, celebrates the research achievements of our staff and emphasises how our research is improving outcomes for patients.

The results of SCGOPHCG Research are commendable and demonstrate how the work of staff is proving world-class health care for West Australians.

Ms Janet Zagari
Executive Director
Sir Charles Gairdner
Osborne Park Health Care Group, NMHS

Dr Aron Chakera
Director of Research
Research Advisory Committee Chair
Sir Charles Gairdner
Osborne Park Health Care Group, NMHS
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Research Governance

All research studies undertaken at Sir Charles Gairdner Hospital and Osborne Park Hospital must undergo a research governance review (or site specific assessment) before the study can commence.

Research Governance is a framework through which institutions are accountable for the research they allow to be conducted under their auspices. The process involves consideration of the ethical, legal, professional, financial, insurance and intellectual property issues for each research project. The governance process is separate to ethical and scientific review and can be conducted in parallel to the ethics approval process.

Human Research Ethics (HREC)

The SCGOPHCG Human Research Ethics Committee (HREC) is accredited by the National Health and Medical Research Council (NHMRC), and is the only HREC in NMHS that holds this standing.

SCGOPHCG HREC is certified to review the following research categories:
- Clinical trials phase I, II, III, IV
- Clinical trials drugs and devices
- Clinical interventional research other than clinical trials
- Population health and/or public health
- Qualitative research

Statistical services

The SCGOPHCG Statistical Consultation Service is available to all researchers employed at SCGH or OPH and who are conducting research at either of these sites.

Investigators may initially access up to 10 hours of free statistical consultation time.

Where there is a reasonable contribution to any publication through analysis and interpretation of data, there is an expectation of inclusion in the authorship of the paper, as per NHMRC guidelines.
This year at a glance

- 18 projects funded by Charlies Foundation for Research
- 2 Ray Florence Shaw Grants
- 436 SCGOPHCGR Total publications in 2018
Aron Chakera,  
Consultant,  
Director of Research  

“If we stop asking questions, we will never know the answers”

Airway wall stained using the masson’s trichrome technique.  
John Elliot  
Senior Research Officer  
Department of Pulmonary Physiology and Sleep Medicine.  
Research Photo Competition

Bronwyn Stuckey,  
Medical Director,  
Consultant Physician,  
Clinical Professor  

“Exploring the interface between reproduction and metabolism”
Charlies Foundation for Research is the heart of a diverse community dedicated to advancing medical research at Perth’s Sir Charles Gairdner and Osborne Park Hospitals. As the primary fundraising body for medical research at Sir Charles Gairdner and Osborne Park, we bring together researchers’ staff, patients, donors, sponsors and partners, providing $250,000 in funding every year to support pioneering, world-class research projects here in Perth.

The research we support is called translational or patient-centred research, which means we fund projects and clinical trials with the most potential to improve care and outcomes for patients.

We make a point of supporting new research and young researchers, enabling highly promising projects – projects that might otherwise struggle to find funding – to gather the preliminary data and momentum they need to secure significant grants from peak bodies. Our ‘seed funding’ strategy and vision has spawned remarkable advances in medical care that have made a huge difference for patients, both locally and globally.

If you would like to find out more about the Foundation’s work, please contact us at:

Charlies Foundation for Research
Ground Floor, E Block
Sir Charles Gairdner Hospital
Hospital Ave, Nedlands, WA 6009
(08) 6457 2042
info@charliesfoundation.org.au

“We couldn’t do it without the help of our local community of donors and supporters.”
Steroid Therapy and Outcome of Parapneumonic Pleural Effusion (STOPPE) trial: a pilot multi-centre placebo-controlled randomized study
Professor Y C Gary Lee
Respiratory Medicine

Long-term outcomes of living kidney donors – medical, psychosocial and economic
Professor Neil Boudville
Renal Medicine

The Gut-Adipose Axis And Its Role In Non-Alcoholic Fatty Liver Disease
A/Professor Leon Adams
Hepatology

ENOX2 as a biomarker for malignant mesothelioma
Professor Jenette Creaney
Respiratory Medicine

A phase II Feasibility Study Comparing Primary Care vs. Hospital-Based Follow Up After Curative Surgery For Patients With Non-Small Cell Lung Cancer
A/Professor Fraser Brims
Respiratory Medicine

A proof-of-principle study of pleural instillation of air to enhance CT detection of pleural malignancy
Dr Rajesh Thomas
Respiratory Medicine

Investigation of a new method for long-term preservation of donor vascular homograft
C/A Professor Bulang He
General Surgical

Harnessing the anti-tumour effects of bacteria as a novel therapy for mesothelioma
Ms Natalia Popowicz
Pharmacy
Sleep Study Oesophageal Catheter

“\textit{I love the excitement of breaking new ground, of examining new drugs and new treatments.}”

David Joske
Haematologist

Exploring the functional significance of mutations identified in women with PCOS on the aetiology of the disorder to achieve better patient outcomes.
Professor Bronwyn Stuckey
Diabetes and Endocrinology

Genomic copy number variations and indel mutations that increase risk of familial nonmedullary thyroid cancer
Clin Professor John Walsh
Diabetes and Endocrinology

Investigating a novel cytokine of metabolic dysfunction
Clinical A/Professor Wai Lim
Renal Medicine

Project Pow WOW: Improving Junior Doctor Wellbeing through Clinical Debriefing at Sir Charles Gairdner and Osborne Park Hospital Group
Dr Jasmin Korbl
Medical

Efficient characterisation of genetic lesions to ensure optimal targeting of osteoporosis therapy.
A/Professor Scott Wilson
Diabetes and Endocrinology

Investigation of altered sensory nerve fibre structure and function in patients with lumbar radiculopathy and radicular leg pain
Professor Brigitte Tampin
Neurosurgery Spinal Clinic, Department of Physiotherapy

PLeural Effusion and Symptom Evaluation (PLEASE) - 2 study: Ultrasound to quantify diaphragm function in pleural effusion.
Clinical Professor Bhajan Singh
Pulmonary Physiology & Sleep Medicine

The role of tissue-resident memory T cells in the outcome of liver transplantation in a murine model.
Professor Luc Delriviere
Surgical

Care for older people in poor health: Piloting a process to identify and support family caregivers with low levels of health literacy
A/Professor Chris Toye
Centre for Nursing Research
The Sir Charles Gairdner Osborne Park Health Care Group and the Ray Florence Shaw Trust offer up to $30,000 for short-term research projects in cardiovascular or ophthalmology research conducted at Sir Charles Gairdner Hospital or Osborne Park Hospital.

Funding is available to support projects that promote the advancement of knowledge and training with the Sir Charles Gairdner Osborne Park Health Care Group by means of study and research into the causes, prevention and treatment.

Cardiovascular research can encompass diseases of the heart and blood vessels as well as coronary artery disease, myocardial infarction, cardiac arrhythmias and valvular heart disease. Ophthalmology research can encompass disease of the eyes as well as retinal diseases, glaucoma, the pathology of scarring in the eye, studies in corneal tissue typing, keratorefractive surgery, laser treatment, tissue culture, therapeutic diagnostic and surgical modalities, clinical medical and surgical ophthalmology, optics, electrophysiology of the eye and the pharmacology of drugs used in eye treatment.

2018 / 19 Successful Projects

- Determining the prevalence of cardiovascular disease (CVD) in a cohort with chronic kidney disease (CKD) using linked data
  Dr Aron Chakera
  Renal Medicine

- Genetic characterisation of achromatopsia pedigrees in the Australian Inherited Retinal Disease Registry
  Dr Tina Lamey
  Medical Technology and Physics
Genetic characterisation of achromatopsia pedigrees in the Australian Inherited Retinal Disease Registry

Dr Tina Lamey
Medical Technology and Physics

“Passion and Perseverance to change the bigger picture”

Michaela Lucas
Consultant, Immunology and Allergy

“A more detailed understanding of a disease will always lead to better patient care.”

Bernadette Williams
Trainee Registrar
Anatomical Pathology

Shirley Jansen
Profession: Vascular Surgeon

“Passion and Perseverance to change the bigger picture”
Department of Health Research Translation Projects
Seeks to support high-quality research projects that have the potential to demonstrate improved cost effectiveness and/or efficiencies that can be delivered to WA Health while maintaining or improving patient outcomes, with a focus on translation of research outcomes into health care policy and practice in WA.

National Foundation for Medical Research and Innovation
Seeks to support the translation of biomedical research projects that have strong potential in addressing unmet community needs.

Funding provided by the foundation is different from other foundations and traditional funding sources which applicants are recommended to read more about the Foundation before applying.

Finding funding
There is a wide range of funding sources, with many universities providing excellent funding search tools. Sir Charles Gairdner Osborne Park Health Care Group has close links with the University of Western Australia which provides a comprehensive site to assist researchers searching for funding sources.

Kim Brookes
Director Allied Health
“Research drives our practice... but also encourages us to question it”

Western Australia DNA Bank.
Fraser Brims
Head of Department,
General Medicine / Respiratory Medicine Consultant

“To keep making progress in medicine we must keep asking ourselves ‘why?’ and ‘how can I contribute?”

Di Twigg
Executive Dean, Professor, Research Consultant

“Our research shows that the right number and mix of nurses saves lives and improves care”

Brigitte Tampin
Research Photo Competition

Quantitative sensory testing: Assessment of touch sensitivity
The Sir Charles Gairdner Osborne Park Health Care Group Department of Research hosts an annual Research week to showcase the advances made by staff in improving the health of our community.

The 2018 Research Week was held at Sir Charles Gairdner Hospital 15-19 October 2018. The week included a variety of events, including poster presentations, new investigator presentations, and research presentations.

**Medical/Scientific: Dr Simon Joseph**

**Title:** Novel non-invasive methods in the assessment and visualisation of diabetic foot microvasculature

**Bio:** Simon is a Master of Surgery student at UWA. He is a primary presenter in multiple national and international vascular and diabetic conferences. Simon has an upcoming poster presentation at a European Society for Vascular Surgery meeting and a presentation at an Australian and New Zealand Society for Vascular Surgery meeting. He is the primary author of two papers published in the Journal of Vascular and Interventional Radiology. Simon has completed data collection for his Masters project and is writing his thesis.
Nursing:
Anne Kimberley
Title: Supporting Transition: From Nurse to Educator

Bio: Anne has worked for 10 years in the speciality of nursing education. During this time Anne has developed and implemented many hospital-wide education programs. Following her research in 2017, Anne is focussed on the early implementation of support and development for novice clinical nurse educators at Sir Charles Gairdner Hospital.

Allied Health:
Abbey Sawyer
Title: Effects of high intensity interval training on exercise capacity in people with cystic fibrosis: tolerance and preliminary findings

Bio: Abbey is a PhD Candidate through Curtin University and works clinically as the A/Senior Physiotherapist in Cardiac Rehabilitation at Sir Charles Gairdner Hospital on a part-time basis. Abbey’s clinical work involves delivering the rehabilitation program, assessing patient outcomes and ongoing liaising with medical teams. Abbey’s career goal is to be an experienced clinician and researcher in the cardiorespiratory field, and be able to translate important evidence-based research directly into clinical practice.
1st Place

**Title:** Lateropulsion status impacts functional improvement and length of stay in stroke rehabilitation

**Authors:** J. Nolan, K. Chan K & E. Godecke

2nd Place

**Title:** Functional Assessment of Mutations in the CaSR Gene Associated With Familial Hypocalciuric Hypercalcaemia

**Authors:** A.L. Magno, P.J. Campbell, K. Leatherbarrow, S.J. Brown, S.G. Wilson, J.P. Walsh & B.K. Ward

3rd Place

**Title:** The Prescription of Best Medical Therapy on Discharge After Infrainguinal Bypass Surgery An Australasian Multi-Centre Retrospective Study

**Authors:** R. Kwok, S. Farah, A. Dean, Y. Sivakumaran, S. Khoo, M. Joret, S. Aitken & S. Jansen

People’s Choice

**Title:** Tissue-resident lymphocytes in solid organ transplantation

**Authors:** Prosser, W.H. Huang, L. Liu, B. de Boer, I. Larma-Cornwall, G. Jeffrey, S. Gaudieri, L. Delriviere A. Kallies & M. Lucas

Photomicrographs of the drug AZT were taken at magnifications of 30x and 50x. Used to illuminate the crystals were polarized and darkfield lighting techniques. AZT is thought to help prevent the replication of HIV, the AIDS virus, also known as HTLV-III.
Awards and Achievements

Acknowledgement in the Clarivate Analytics Highly Cited Researchers 2018
• Graeme J. Hankey was recognised as a world-class researcher, selected for his exceptional research performance. Ranked in the top 1% for his contributions to the field Science.

Category: Clinical Medicine
Primary Region: Australia
Primary Institution: The University of Western Australia
Secondary Affiliation: Sir Charles Gairdner Hospital

Snowdome Foundation and the WA Lymphoma Centre for Excellence
• The Snowdome Foundation has forged a partnership with the SCGH Haematology Department, through Dr Chan Cheah, to create a WA Lymphoma Centre for Excellence based at SCGH. This is to increase access to clinical trials and improve the patient journey for patients with blood and bone marrow cancers. A recent fundraising dinner and additional pledges have raised nearly $500,000.

Linear Clinical Research
• The haematology department has strengthened its partnership with Linear to develop new clinical trials for patients with blood and bone marrow cancer.

Cancer Council WA Early Career Cancer Researcher of the Year (2018)
• Dr Chan Cheah

• Ms Amie Connor

PhD Completion
• Tammy Corica Clinical Trials Manager passed her PhD after 10 years of work on intra-operative radiotherapy for early breast cancer with Prof David Joseph and Dr Mandy Taylor (three published papers and one under review).

Occupational therapy functional cognitive assessment research project: inter-rater reliability of the Kettle Test
Kirsty MACDONALD
Research Photo Competition
Good Clinical Practice (GCP) Training
All researchers conducting clinical trials should hold a current good clinical practice certification. Free online training is available via the WA Health Translational Network (WA HTN) https://www.wahtn.org/event/good-clinical-practice-gcp-training-course/.

Research Skills Seminar Series
The series is part of the Department of Child Health Research Education Program through the Child and Adolescent Health Service and offers open-access, free seminars on key topics across the whole research process.

WA Health Translational Network (WA HTN) Research Education and Training Program (RETP)
The RETP provides free online research education for staff and students to partner organisations of the WA HTN. The topics and content are developed by the RETP team in collaboration with a range of content experts to ensure that the training provided is practical, concise and suitable for all researchers from any background and level of experience. All module completion contributes towards continuing professional development hours (CPD).

Library services
Libraries provide an invaluable service and resource for researchers including access to:
- Online journals
- Search engines
- Endnote
- Researcher profiles

OPH Staff should use the Osborne Park Hospital Library website http://scgophlibrary.health.wa.gov.au/oph

SCGH Staff should use the SCGH Library website http://scgophlibrary.health.wa.gov.au/home

The SCGH Library is located at SCGH in E Block, Level 1, Room 229 and is open Monday to Thursday between 8:45am-12:15pm and 1-4pm.

The telephone number for the library is (08) 6457 4143 or alternatively you may contact them via email at library.scgh@health.wa.gov.au
Optical Coherence Tomography reconstruction images of the cutaneous microvasculature in the dorsum of the foot showing increased baseline microvascular density and reduced hyperaemic response amongst diabetic foot ulcer patients compared to healthy controls.

Simon JOSEPH
Research Photo Competition

Chris Toye
Associate Professor

“Care: What works? What doesn’t work? and why?”
In late 2016, the Sir Charles Gairdner Hospital Department of Research sought to find a provider with expertise in the areas of research design and biostatistics to support hospital researchers from the inception of a project through to completion and publication, as well as provide education sessions, assistance in study design and implementation, and support to the hospital’s ethical review process.

The Institute for Health Research (IHR) at the University of Notre Dame Australia was selected following a competitive tender process to provide this service over a four year period from 2017.

As a biostatistical unit embedded in an academic institution, IHR is staffed by post-doctoral clinical researchers who are actively engaged in clinical research and have extensive training and experience in the teaching and the application of quantitative and qualitative biostatistics across a broad range of clinical disciplines. As a consequence, they have a detailed understanding of the processes and requirements of health research and how to assist clinicians undertake and publish meaningful outcomes.

The team of six biostatisticians, including a dedicated resource based at Sir Charles Gairdner Hospital two days per week, is led by Professor Max Bulsara. The IHR staff have all been employed on the strength of their statistical knowledge, their oral and written communication skills and their ability provide one-on-one support to researchers.

This team is associated with local, national and international research projects, supervises almost 40 research students and contributes to approximately 70 peer reviewed publications annually.

The goal of the IHR is to mutually increase the research capacity of both organisations that benefits the patients attending the hospital.

This goal will be achieved through the development of long-term relationships with researchers at SCGHPHCG through meaningful advice and training opportunities, collaborative grant applications, joint publications and co-supervision of students undertaking a Master of Research, Professional Doctorate or PhD.

Since the service started there have been 144 requests for assistance for biostatistical support from 47 different departments with the largest users shown in the figure below. While approximately half the jobs took over 10 hours to complete, some took substantially longer due to complexity. Three qualitative reports have been provided based on two projects. As part of one project, a world café event was developed and facilitated.

A report of findings and outcomes was subsequently produced. In addition, some SCGH staff attended free training sessions in the use of SPSS and STATA and customised lectures and tutorials were provided to JMOs, BPTs and ICU trainees. Pleasingly, to date there have been 20 joint publications submitted for review with five now in press, and a further 13 abstracts for conference presentations.
Utilisation of service by department

144 biostatistical support requests

Sue Jenkins
Adjunct Professor

“Research that helps my patients is the most rewarding of occupations?”
Cough Reflex Testing to determine cough reflex and therefore identify silent aspiration in stroke patients by administering citric acid via nebuliser.

Indu JACOB

Achievements for 2018 include 26 publications in peer reviewed journals, four completed research projects, six completed quality improvement projects, and evidence reviews for 13 Nursing Practice Guidelines revised in 2018. A further 15 research projects and 13 quality improvement projects are in progress.

Twelve participants in the Engaging iN Research 2018 program presented their project results during the Sir Charles Gairdner Osborne Park Health Care Group Research Week. This 8-month educational program is offered annually in collaboration with the Centre for Nursing Education and aims to enhance a culture of enquiry and evidence-based healthcare practice using an inter-professional approach.

The Centre for Nursing Research has as its purpose to be a centre of excellence in translational health research. It maintains strategic partnerships with three universities: Curtin University, Edith Cowan University and Murdoch University. Researchers collaborate with clinical nursing experts and multidisciplinary teams to conduct nurse-led research that generates and translates evidence to inform quality health care practice. Current programs of research encompass Safety and Quality in Acute Care; Care of Older Persons and Family Caregivers; Workforce; and Cancer and Palliative Care. Researchers also provide expertise and support to nurses conducting quality improvement activities across the organisation.

Program content includes research methodology and critique, knowledge translation, and presentation skills. Each participant leads a quality improvement project with support of a research mentor. In 2018, participants included five nurses and two Occupational Therapists from Sir Charles Gairdner Hospital, three nurses from Perth Children’s Hospital, and two nurses from WA Cancer and Palliative Care Network.

During 2018, the Centre for Nursing Research has provided nursing representation on the Sir Charles Gairdner Hospital Research Advisory Committee, and the Sir Charles Gairdner Osborne Park Health Care Group Human Research Ethics Committee and its Scientific Review Subcommittee. It also provided research representation to the following organisational multidisciplinary committees: Cognitive Impairment Committee; Medication Safety Committee; Nursing Practice Guideline Committee; Clinical Nurse Specialist Committee and its Professional Practice Subcommittee; and the organising committee for Sir Charles Gairdner Osborne Park Health Care Group Research Week 2018.

Centre for Nursing Research staff provided educational content to Sir Charles Gairdner Hospital staff in the topics of evidence-based practice, applying ethical principles to clinical practice, qualitative research critique, understanding and preventing stress and burnout in nursing, and overviews of current research.
Cough Reflex Testing to determine cough reflex and therefore identify silent aspiration in stroke patients by administering citric acid via nebuliser.

Indu Jacob

The Charlies Study Support Group, convened in collaboration with Centre for Nursing Education, provided group and individual mentoring and support to 15 nurses undertaking post-graduate study during 2018. In addition to researchers’ university-based student supervision, Centre for Nursing Research staff provided site support to a ward-based nurse undertaking PhD studies, and academic supervision for a nurse based in Operating Theatres undertaking a Masters by Research degree.

Anne Williams
Professor

“Creating positive supportive healthcare environments by generating and translating knowledge”

The inaugural meeting of the QEII Nursing Research Network a collaboration of nurse researchers based at Sir Charles Gairdner Hospital and Perth Children’s Hospital was held in November 2018.
Project Title: Service innovation to improve outcomes and quality of care for patients receiving chemotherapy for breast and colorectal cancer at Sir Charles Gairdner Hospital.

Funding Amount: $144,416

Funding Body: WA Cancer and Palliative Care

CIs: Whitehead, L., Myers, H., & Twigg, D.

Project Title: Care for older people in poor health: Piloting a process to identify and support family caregivers with low levels of health literacy.

Funding Amount: $38,984.57

Funding Body: Sir Charles Gairdner and Osborne Park Health Care Group and Charles Foundation for Research

CIs: Hill, K., Toye, C., Jacinto, A., Slatyer, S., Bronson, M., Burton, E.
Project Title: Multicentre randomised controlled trial: caregiver, patient, and system outcomes from a program supporting informal caregivers of older people discharged home from hospital.

Funding Body: NHMRC

Funding Amount: $1,500,381

CIs: Toye, C., Hill, AM., Moyle, W., Moorin, R., Hill, JD., Slatyer, S., Bryant, C., Waldron, N., Aoun, S., Parsons, R., Kamdar, A., Reberger, C., Jones, C., Grealish, L., Bronson, M., Bulsara, M., Maher, S. Claverie, T.

Project Title: Developing a process to screen for health literacy in family caregivers of older people and refining a support intervention for use with caregivers experiencing low levels of health literacy

Funding Body: Nurses Memorial Charitable Trust

Funding Amount: $19,500

CIs: Jacob, E., Coventry, L., Davies, H., Hussain, M.

Project Title: Sampling blood from peripheral intravenous cannulas and hemolysis rates: an observational study.

Funding Body: Sir Charles Gairdner and Osborne Park Health Care Group and Charles Foundation for Research

Funding Amount: $14,956

CIs: Hill, K., Toye, C., Jacinto, A., Slatyer, S., Bronson, M., Burton, E.
Research continues to have a strong focus within the Physiotherapy Department at Sir Charles Gairdner Hospital. From 2017 to now, 30 different staff members in the department were authors in 50 publications in peer reviewed journals. The most pleasing aspect of this increased output from previous years has been the increasing diversity of publications in different clinical areas. Almost half of the 30 staff became authors for the first time.

Ian Cooper in conjunction with the Perron Institute led by Dr Soumya Ghosh – 2018 Zrisnki grant ‘Improvement of pulmonary function, gait and mobility in Parkinson’s Disease following Inspiratory Muscle Training’ ($140,000).

Abby Sawyer and Nola Cecins SCGH RAC Grant. ‘Effects of high intensity interval training on exercise capacity in people with cystic fibrosis: a randomised controlled trial’ ($40,000).

Dr Brigitte Tampin and colleagues – SCGH RAC Grant. ‘Investigation of altered sensory nerve fibre structure and function in patients with lumbar radiculopathy and radicular leg pain’ ($33,000).


Tamara Hatton, Nola Cecins, Julien Graciet and A/Prof Sue Jenkins. Physiotherapy Grant What effect does physiotherapy management of the upper spine have on breathlessness and lung function following exercise in people with Chronic Obstructive Pulmonary Disease (COPD)? ($27,000).

Madeline Gaynor, Abbey Sawyer, A/Prof Sue Jenkins and Jamie Wood Physiotherapy Grant ‘Agreement of wearable heart rate monitors and 3-lead electrocardiogram during exercise training in adults with cystic fibrosis: a pilot study’ ($16,000).

2017-18 saw the release of 2 small internal grants.
Twelve presentations given at National and International conferences by a variety of physiotherapy clinical staff at SCGH. Highlights include:

Jamie Wood - Best Poster in the Physiotherapy section at the European Cystic Fibrosis Conference in Serbia.

Dr Diane Dennis - Best Paper Award at the 2017 Australasian Simulation Conference for her paper titled ‘The Inception Sim: Findings from a Live and Immersive Multilayered Simulation on Creating a Safety Container’.

Hazel Mountford - Best Clinical Paper Award at the Australian Cardiovascular Health and Rehabilitation Associations 2017 Annual Scientific Meeting for a presentation titled: Is home-based exercise training as effective as a supervised exercise training program for people with coronary heart disease?

*Research Collaborations*

Liz Hurn and Tracy Hebden-Todd. Site coordinators for the multicentre ‘Chesty’ trial. This is a large clinical trial investigating postoperative pulmonary complications post-surgery.

Tracy Hebden-Todd and Amanda Ziatas. Site coordinators for the multicentre TEAM Trial. This is a large clinical trial investigating the impact of early mobilisation in ICU on morbidity and length of stay.

**Speech Pathology**

3 Successful small grants funded

- Expiratory Muscle Strength Training in Motor Neurone Disease
- Investigating the Relationship between Volitional Cough Airflow Measures and Swallowing Stroke
- Secretions and Associated Physiology in Patients with Dysphagia

**Dietetics & Nutrition**

*Research Summary*

- Indirect Calorimetry in Cystic Fibrosis (CF)
- The GAINS Trial – Growth and Anabolism in Intensive Care Survivors
- TARGET Nutrition Study – The Augmented versus Routine approach to Giving Energy Trial: A randomised controlled trial
- Development of consensus on Models of Care in Adults with Intestinal Failure using a modified Delphi approach.
- Nutrition and phosphate awareness in patients with end stage renal failure (ESRF) at an in-centre haemodialysis unit in WA.


Nursing


Ho JP, Alison JA, Cindy Ng LA, Wootton SL, McKeought ZJ, Jenkins SC et al. People with COPD who respond to ground-based walking training are characterised by lower pre-training exercise capacity, better lung function and show greater progression in walking training distance. Journal of Cardiopulmonary Rehabilitation and Prevention 2019

Jenkins S. Field walking tests and functional tests for patients with cardiopulmonary disease. The Japanese Association of Cardiac Rehabilitation 2019


Hill K, Cindy Ng L, Wootton SL, McKeough PE, Hillman D, Jenkins C, Spencer L, Jenkins SC, Cecins NM, Alison JA. The minimal detectable difference for endurance shuttle walk test performance in people with COPD on completion of a program of high-intensity ground-based walking. Respiratory Medicine 2019

Lian R, Cavalheri V, Wood J, Jenkins S, Straker LM, Hill K. Higher levels of education and full-time work are realistic goals for people with cystic fibrosis. Respiratory Care 2019


Wootton, S, Hill K, Alison JA, Li Whye Cindy Ng, Jenkins S, Eastwood PR, Hillman DR, Jenkins C, Spencer LM, Cecins N, McKeough AJ. Effects of ongoing feedback during a 12-month maintenance walking programme on daily physical activity in people with COPD. Lung 2019


Dennis, DM., Carter, V., Trevenen, M., Tyler,J., Perella, L., Lori, E., Cooper, I. Do acute hospitalised patients in Australia have a different body mass index (BMI) to the general Australian population: a point prevalence study? Australian Health Review, 2018

Gaynor M, Wood J. Mechanical insufflation–exsufflation for airway clearance in adults with cystic fibrosis. Respirology Case Reports. 2018


Mirza F, Jenkins S, Cecins N, Hill K. Regression equations to estimate the two-minute walk distance in Malaysian adults aged 40 to 75 years. Respirology 2018

Sawyer A, Lewthwaite H, Gucciardi DF, Hill K, Jenkins S and Cavalheri V. Behaviour change techniques to optimise participation in physical activity or exercise in adolescents and young adults with chronic cardiorespiratory conditions: a systematic review. Intern Med J. 2018


Tampin B, Vollett J, Schmid AB. Sensory profiles are comparable in patients with distal and proximal entrapment neuropathies, while the pain experience differs. Curr Med Res Opinion. 2018


Wood J, Sawyer A, Mulrennen S, Bullock A. Respiratory exacerbation in a young adult with cystic fibrosis and tricuspid atresia. Respirology Case Reports 2018
Publications

Total publications in 2018 (including journal articles, reviews, conference papers, letters, book chapters, editorials and notes): 436

Number of papers in journals with an impact factor greater than 8: 36
*disclaimer: the impact factor does not include all fields as niche fields will by definition be under-represented. Number of original research papers: 315

Number of original research papers in key journals – they defined ‘key journals’ as journals with an impact factor above 10:

- American Journal of Gastroenterology: 1
- Annals of Oncology: 1
- Annals of the Rheumatic Diseases: 1
- Journal of Gastroenterology: 1
- Journal of Hepatology: 2
- Journal of Allergy and Clinical Immunology: 5
- Journal of Hepatology: 1
- Journal of Thoracic Oncology: 1
- Lancet Global Health: 1
- Lancet Global Health: 2
- Journal of Molecular Psychiatry: 1
- Journal of Nature Communications: 1
- Journal of Nature Genetics: 2
- The New England Journal of Medicine: 3

Peter Eastwood
Professor

“Translation of research discoveries to the patient bedside is best achieved by having clinicians and scientists working side-by-side.”
Occupational Therapy intervention involving repetitive upper limb retraining with an acute stroke patient

Judith Talbot

Research Photo Competition

436 Total publications
**ANAESTHESIA**


Crockett M, Robinson AE, Harmear A, Phillips TJ. Posterior meningeal artery DMSO injection resulting in reproducible asystole prior to Onyx therapy of a dural arteriovenous fistula: a previously undescribed variant of the trigeminocardiac reflex or a new phenomenon? BMJ Case Reports. 2017 July


Gibbs NM. Anaesthesia, not for resuscitation orders, and shared decision-making. Anaesth Intensive Care 2016; 45 (Editorial)

Gibbs NM. Can the timing of perioperative fluids affect hospital length of stay? Anaesth Intensive Care 2016, 45 (Editorial)

Gibbs NM. Culwick MD, Merry AF. A cross-sectional overview of the first 4,000 incidents reported to webAIRS, a de-identified web-based anaesthesia incident reporting system in Australia and New Zealand. Anaesth Intensive Care 2017; 45

Gibbs NM. Culwick MD, Merry AF. Patient and procedural factors associated with an increased risk of harm or death in the first 4,000 incidents reported to webAIRS Anaesth Intensive Care 2016; 45

L Horgan, B Knezevic, E Klinken, R Clarke, P Sadie, P Piatt, C Bundell “Just a spoonful of cough syrup: A Case of Photocodine Hypersensitivity”. Internal Medicine Journal 47 (S5), 10-10


Paech MJ , Kaye R , Baber C, Nathan EA. Recovery characteristics of patients receiving either sugammadex or neostigmine and glycopyrrolate for reversal of neuromuscular block: a randomised controlled trial. Anaesthesia. Dec 2017


SC Sargant, MJ Lennon, RJ Khan, D Fick, H Robertson, S Haebich. Extended duration regional analgesia for total knee arthroplasty: a randomised controlled trial comparing five days to three days of continuous adductor canal ropivacaine infusion. 2018 May. 46(3)

**DERMATOLOGY**


Ng J, Harvey NT, von Nida J, Wood BA. Subungual acantholytic dyskeratotic acanthoma: an unusual cause of longitudinal erythronychia. Pathology. England; 2018


Jamie Wood
Physiotherapist
“Using innovative technology to improve patient care.”
Physiotherapy. May 2018


**EMERGENCY MEDICINE**


Codreanu T, Ngo H, Robertson A, Celenza A. Challenging assumptions: what we need to address in our disaster risk reduction efforts. Prehosp Disaster Med. 2017; 31: 1-4

Collins D, Selvey L, Celenza A, Riley T. Community-acquired Clostridium difficile infection in emergency department patients in Western Australia. Anaerobe 2017; 48: 121-5

Edgar S, Carr S, Connaughton J, Celenza A. Student motivation to learn: is self-belief the key to transition into university and first year performance in an undergraduate physiotherapy program? Submitted to Physiotherapy. May 2018


**ENDOCRINOLOGY AND DIABETES**


vascular disease mortality in older women. The British Journal of Nutrition 117, 1577-1586
cell transplantation may only be applicable to selected patients with secondary CNS diffuse large B-cell lymphoma. Br J Haematol. 2017;178(6):991-994


Chin CK, Cheah CY. How I treat patients with aggressive lymphoma at high risk of CNS relapse. Blood. 2017;130(7):867-74


El-Galaly TC, Cheah CY. Questioning the value of routine imaging for patients with mantle cell lymphoma in first remission. Leuk Lymphoma. 2018;59(4):775-7


Golledge J, Hankey GJ, Almeida OP, Flicker L, Norman PE, Yeap BB. Plasma free thyroxine in the upper quartile is associated with increased incidence of major cardiovascular events in older men that do not have thyroid dysfunction according to conventional criteria. Int J Cardiol. 2018; 254: 316-321. doi: 10.1016/j.ijcard.2017.10.100.


Graham C, Lewis S, Forbes J, Mead G, Hackett ML, Hankey GJ, Gommons J,


The effect of Vertebroplasty on mobility and reduced length of stay in osteoporotic fractures in the acute and subacute setting. The Royal Perth Hospital experience. Jayaratne, TJ; Davies, S; Dillon


Brigitte Tampin,
Advanced Scope Physiotherapist
“It is exciting and challenging to explore the unknown”
Conferences & Presentations

ANAESTHESIA

Australian and New Zealand College of Anaesthetists Annual Scientific Meeting 2018

1. An Audit of Femoral Nerve Catheters and Blocks in the Pre-operative Analgesic Management of Neck of Femur Fractures at Sir Charles Gairdner Hospital
Dr Dale Currigan

2. The Peri-operative Management of Neck of Femur Fractures at Sir Charles Gairdner Hospital – Are we Meeting the Guidelines?
Dr Dale Currigan

3. Is a Scan part of the Plan? A study evaluating the use of Myocardial Perfusion Scans (MPS) as a pre-operative assessment tool to assess cardiovascular risk in patients who undergo Endovascular Aneurysm Repair (EVAR)
Dr Dale Currigan

GENERAL MEDICINE

Royal Australasian College of Physicians Congress 2018

1. The processes that influence hospital length of stay (LOS) in patients on transitional care programme (TCP)
Wei S, Sung E and Senaratne S

2. Spiralling out without Jaundice
Cannon L, Jasper E, Senaratne S, Kodali V

3. Preventing Hospital Readmissions: Identifying patients at high risk who may benefit from early outpatient review.
Patel J, Jasper E, Chandra Sekaran U, Travlos G, Francis J, Kamdar A

HAEMATOLOGY

European Haematology Association Meeting June 2018

1. Pooled analysis of safety data from Zanubrutinib (BGB-3111) monotherapy studies in haematologic malignancies

2. Improved depth of response with increased follow-up for patients with Waldenstrom Macroglobulinemia (WM) treated with Bruton’s Tyrosine Kinase inhibitor Zanubrutinib

3. Diffuse large B-cell lymphoma (DLBCL) presenting with synchronous CNS and systemic disease at diagnosis: results from an international collaborative study

NEUROLOGY

Australian and New Zealand Association of Neurologists

1. Chorea
Rick Stell

5th International Conference on Serious Games and Application for Health

1. A usability evaluation of Neuromenders’s upper limb game based system for stroke survivors.

Australasian Sleep Association Meeting

1. Dysphagia as a Predictor of Sleep-Disordered Breathing in Acute Stroke

4th European Stroke Organisation Conference, Gothenburg, Sweden, 2018

1. New insights in stroke management
Hankey GJ

HEPATOLOGY

Annual Meeting of the Asia Pacific Association for the Study of the Liver. New Delhi, India 2018

1. Ad libitum Mediterranean and Low Fat Diet both Significantly Reduce Hepatic Steatosis: A randomized controlled trial.
Annual
**NEURORADIOLOGY**

**Australian and New Zealand Society of Neuroradiology Annual Scientific Meeting 2018**

1. Next Generation of Brain Tumour Imaging
   A/Prof. Michael Bynevelt
   Princess Margaret Hospital Grand Round

2. Venous stenting for intracranial hypertension. Dr Tim Phillips

**Australasian Neurosciences Nurses Association Seminar/Subarachnoid Haemorrhage Not just a headache 2018**

1. Diagnosis & Development of Interventional Techniques for Dr Con Phatouros

**RADIATION ONCOLOGY**

**Sydney Catalyst**

1. Radiotherapy – the other chemotherapy drug
   Martin Ebert

**Engineering and Physical Sciences in Medicine, Hobart TAS**

1. Physics and cancer: radiation and beyond
   Martin Ebert

**European Society for Radiotherapy and Oncology Barcelona**

1. Inter-observer contouring variation of multiple pelvic structures on CT and MR for prostate cancer
   Roach D, Ebert MA, Jameson M, Dowling JA, Kennedy A, Greer P, Holloway LC

2. Can contouring probability maps be a predictor for prostate cancer treatment outcome and toxicity?

**American Society of Clinical Oncology Genitourinary 2018**

1. Ten year final results of the TROG 03.04 (RADAR) randomised phase 3 trial evaluating duration of androgen suppression ± zoledronate for locally advanced prostate cancer
   David John Joseph, David S Lamb, James William Denham, Christopher Oldmeadow, John Attia, Allison Steigler

**RENAL MEDICINE**

**International Society of Peritoneal Dialysis Conference**

1. PPOPPS: What have we learned about infections
   N Boudville

**RHEUMATOLOGY**

**Australian Rheumatology Association Scientific Meeting 2018**

   WD Raymond, David Preen, Helen Keen, Charles Inderjeeth, Johannes Nossent.

2. Hypocomplementemia, disease activity and damage accrual in SLE. Australian Rheumatology Association Scientific Meeting. Melbourne, Australia.
   WD Raymond, Lauren Tyack, Gro Eilertsen, Johannes Nossent

3. The role of soluble erythropoietin receptor levels in patients with Systemic Lupus Erythematosus. Heather Jones, Warren Raymond, Gro Ostli Eilertsen, Johannes Nossent

4. Hospital admission rates and characteristics for childhood and adult IgA vasculitis in Western Australia. Johannes Nossent, Warren Raymond, Helen Keen, Charles Inderjeeth, David Preen


7. Insulin-like growth factor-1 (IGF1) in systemic lupus erythematosus: relation to disease activity, organ damage and immunological findings
   James Waldron, Warren Raymond, Gro Eilertsen & Johannes Nossent
**Conferences & Presentations**

**Occupational Therapy**

**Neurological Disorders Conference 2019 - Germany**
1. Human Perception of Verticality: Lateropulsion & Retropulsion - Should there be a push for change in service delivery for patients with lateropulsion
   Nolan J, Chan K, Godecke E, Singer B

**European Stroke Organisation Conference 2019 - Milan**
2. The association between contraversive lateropulsion and outcomes post stroke: A systematic review
   Nolan J, Chan K, Godecke E, Singer B

**Australasian College of Emergency Medicine Conference 2018 - Perth**
1. Clinical Outcome and Cost Analysis of a Brief Intervention for the Prevention of Falls in the Emergency Department
   Harper K, Barton A, Arendts G, Celentza A

**Australian Hand Therapy Association National Conference 2018 – Melbourne**
1. Outcomes following surgical management for single proximal phalanx fractures: a retrospective study.
   Byrne B, Jacques A, Gurfinkel R

**Physiotherapy**

**Seventh International Congress on Neuropathic Pain 2019 - London**
1. Relationship of QST measures between low back and leg sites in people with radicular leg pain.
   Ridehalgh C, Tampin B, Schmid A

2. Somatosensory profiles in patients with non-specific neck arm pain with and without positive neurodynamic tests.
   Boettger K, Tampin B, Ballenberger N, Landmann, G, Stockinger L, Schmid A

3. Concurrent validity of a low-cost and time-efficient clinical sensory test battery to evaluate somatosensory dysfunction.
   Zhu GC, Boettger K, Slater H, Cook C, Farrell SF, Hailey L, Tampin B, Schmid A
Snapshot of Staff with an Adjunct Appointment by Specialty

Haematology
12
University of Western Australia

Endocrinology & Diabetes
University of Western Australia

Anaesthesia
11
Edith Cowan University
University of Western Australia
University of Notre Dame
Contributions To The Research Community

Many researchers contribute to the broader community in a variety of ways. Below are a snapshot of the SCGOPHC contributions.

**ANAESTHESIA**
- C/Prof Neville Gibbs - Chief Editor Anaesthesia and Intensive Care Journal
- Dr Celine Baber - Reviewer for Anaesthesia and Intensive Care Journal
- Dr Brien Hennessy - Reviewer for Anaesthesia and Intensive Care Journal
- Dr Peter Platt - Reviewer for journals Anaesthesia and Intensive Care, Anesthesiology and British Journal of Anaesthesia
- Dr Lindy Roberts - Reviewer for British Journal of Anaesthesia and Anaesthesia and Intensive Care
- Dr William Weightman - Reviewer for British Journal of Anaesthesia and Anaesthesia and Intensive Care

**GASTROENTEROLOGY**
- Development of a Filemaker Pro database that enables data collection through queries to the procrep database application. This data has been used across several sites for research purposes.

**HAEMATOLOGY**
- Editorial board, Leukemia and Lymphoma (Chan Cheah)
- Reviewer – Lancet, Blood, British Journal of Haematology (Chan Cheah)
- PHD supervision: Ms Claire Munsie RCT of exercise in adolescents and young adults with cancer. Co-supervisor with UWA School of Human Movement (David Joske)
- Inaugural co-lead of the Australian T-cell Lymphoma Network (Dejan Radeski)

**DERMATOLOGY**
- JC Member of Australasian College of Dermatologists Academic Research Committee

**ENDOCRINOLOGY AND DIABETES**
- Walsh, Wilson, Stuckey, Prince, Rea - supervising 5 PhD students

**NEUROLOGY**
- Hankey GJ, Chair, Data Safety Monitoring Committee of six clinical trials:
  - A multi-centre, randomised controlled Trial of Exenatide in Acute Ischemic Stroke (TEXAIS) in Australian and New Zealand. TEXAIS - Trial of EXenatide in Acute Ischaemic Stroke (PI: C Bladin)
  - A Randomized, Double-blind, Placebo-controlled Phase II Multi-Center Evaluation to Assess the Safety and Tolerability of DM199 Administered Intravenously and Subcutaneously in Subjects with Acute Ischemic Stroke (ReMEDy Trial)
  - ATTEND trial of Family-Led RehabiliTaTion after stroke in INDia.
  - Preventive Antibiotics in Stroke Study (PASS), Academic Medical Centre, Amsterdam, The Netherlands

Hankey GJ Member, Data Safety Monitoring Committee of five clinical trials
- Enhanced Control of Hypertension and Thrombolysis Stroke Study (ENCHANTED). An international quasi-factorial randomized comparative clinical trial of low versus standard-dose rTPA and intensive versus guideline-recommended blood pressure control in patients with ischaemic stroke who are eligible for thrombolysis.
- STAtins in Reducing Events in the Elderly (STAREE) clinical trial.
- Opti-Med Study: A randomised controlled trial of deprescribing to optimise health outcomes for frail older people.
- PROTECT-U: a Prospective
Randomized Open-label Trial to Evaluate risk faCTor management in patients with Unruptured intracranial aneurysms (PIs: Gabriel Rinkel, Ale Algra, Mervyn Vergouwen and Nima Etminan; The Netherlands and Germany)

Hankey GJ Steering Committee:
• AFFINITY trial (Australia, New Zealand, Vietnam): Chair
• FOCUS trial (UK)
• EFFECTS trial (Sweden)
• Longitudinal Study of Young Patients with Embolic Stroke of Undetermined Source (ESUS), Population Health Research Institute, Canada
• Steering Committee, Reducing the International Burden of Stroke Using Mobile Technology (RIBURST) and Stroke Riskometer app Study (PI: Prof V Feigin, MD)
• NAVIGATE-ESUS trial of rivaroxaban vs aspirin in patients with recent Embolic Stroke of Undetermined Source (ESUS), Population Health Research Institute, Canada and Bayer, Germany
• Australian Stroke Research Network (ASRN), Stroke Foundation (Chair RI Lindley)

Hankey GJ Editorial positions:
• Associate Editor, Circulation
• Editorial Consultant, The Lancet
• Editorial Consultant, The Lancet Neurology
• Consulting Editor, International Journal of Stroke (World Stroke Organisation)
• Section Editor, Neurovascular and Neurodegenerative Diseases, Journal of the American College of Cardiology (JACC)

Editorial board member:
• Stroke
• Cochrane Stroke Review Group
• Cerebrovascular Diseases
• International Journal of Stroke
• Neuro-epidemiology
• Journal of Thrombosis and Thrombolysis, and
• International Review of Thrombosis.

Hankey GJ American Heart Association/American Stroke Association, Council on Stroke, International Stroke Conference Program Committee member

Hankey GJ Board member, World Stroke Organisation

Hankey GJ Selection Committee 12 for nominees for Fellowship of the Australian Academy of Health and Medical Sciences, 2017

**RADIATION ONCOLOGY**

Aylin Yahya – lay member of the SCGPHCP HREC
Martin Ebert, Tammy Corica and Eva Arneric – members of the TransTasman Radiation Oncology Group Secondary Analysis Committee
Tammy Corica – SCGH Cryofacility Committee Member
Martin Ebert – Member Cancer Council Western Australia Postdoctoral Fellowships Committee
Martin Ebert – Member of International Advisory Board for journal “Physics in Medicine and Biology”; Associate Editor for journal “Medical Physics”; regular reviewer for 10 other international journals
Martin Ebert – research student supervision 2017-18; 3x PhD students, 14x MSc students
Martin Ebert – International Advisor, International Conference on Medical Physics in Radiation Oncology and Imaging (ICMPROI), Dhaka, Bangladesh, March 2018

**RENAI MEDICINE**

Chair of the AKTN Scientific Committee - N Boudville

**UWA SCHOOL OF BIOMEDICAL SCIENCES**

Supervision of research students
Patient consultations
Thank you to all staff who have been involved in the creation of the first Sir Charles Gairdner Osborne Park Health Care Group, Research Report.

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Graphic Design by Anita Dening, Audio Visual Production Unit, Sir Charles Gairdner Hospital, Perth, Western Australia.

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