Since 2009, Epworth Research Institute has built a reputation as a high quality research institute within the private teaching hospital environment.

Research at Epworth involves multi-disciplinary teams across all Epworth sites. Our collaborations with researchers locally, nationally and internationally are expanding rapidly, providing an exciting environment for novice, early career and established clinical researchers to pursue their projects.

Epworth has undertaken an impressive journey to transform into a pre-eminent academic hospital group providing excellence in clinical services, education and research.
**KEY ACHIEVEMENTS 2012/13**

**PUBLICATIONS AND ABSTRACTS**

- **Publications**
- **Abstracts**

**ERI GRANT VALUE AWARDED (AUD)**

<table>
<thead>
<tr>
<th>Year</th>
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**CONTRACT VALUE**

- Contracted value = recruitment target multiplied by per patient payment for completed patient

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<th>Year</th>
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**RESEARCH PROJECTS BY AREA 2012/13**

- Orthopaedics
- Obstetrics and Gynaecology
- Neurology
- Rehabilitation
- Intensive Care
- Cardiology
- Traumatic Brain Injury
- Education and Career
- Other Research Areas
- Quality
- Other

- Total: 102 projects
Health and medical research is now an established part of the academic environment at Epworth HealthCare, with many of our clinicians, staff and patients participating in a wide variety of clinical and translational research programs across a broad range of clinical areas. The Epworth Research Institute (ERI) was established in 2009 and in this report we celebrate the achievements of the past three years that have resulted in health and medical research becoming an integral part of Epworth clinical activities.

In our foundation years, we focused on providing key personnel and services to support research projects across all Epworth sites. This year, we have broadened our horizons to increase external collaborations and increase the role of the ERI in professional research groups and advocacy for research within the private health sector. The growing maturity of Epworth research activities is reflected in our rapidly increasing publication rate, our expanding commercial trial involvement, our inclusion in national forums run by the National Health and Medical Research Council and other government bodies and industry organisations, and our increasing role in advocacy for research within the private health sector.

The Epworth Research Institute’s vision to improve health and healthcare through research is fast being realised. Highlights of 2012/13 included:

- The third round of ERI Grants were finalised in May, with over $226,000 distributed to support five major grants (up to $50,000) and four small grants (up to $10,000). The ERI Research Committee was impressed by the quality of the applications for the year, with competition for funding increasing each round.
- The third Annual Epworth Research Week was held in May, with a poster competition in the Richmond Auditorium; daily sessions with expert internal and external speakers addressing areas of current research interest, including the value of registries and the history of renal denervation for hypertension, and our first industry and partners’ research forum exploring opportunities for efficiency gains in commercial clinical research.
- The 2013 Epworth Research Institute Dinner was held during Research Week, with over 100 people joining together to celebrate our achievements and the successful grant recipients. The Dinner was attended by ERI and Epworth Board members, Epworth Executive team, clinicians and staff involved in research, collaborating partners and for the first time, ERI benefactors.
- Our successful Epworth Research Forums have been incorporated into the Grand Rounds schedule and increased to be a regular monthly event.
- We have continued to be actively involved as a founding member of the Monash Partners Academic Health Science Centre that has now been formally endorsed by the State Government and provided with seed funding for administrative and research functions.
- We have successfully convened the first meeting of a new research collaborative group linking the major charitable healthcare organisations around Australia. This group includes the Wesley Hospital in Brisbane, the Sydney Adventist Hospital, St John of God Health, Cabrini Health and Epworth.
- We have efficiently implemented our state-of-the-art computer-based clinical trials management system. This has enabled a seamless integration across research, governance and financial components of trial management.
- Our Executive Director, Research Dr Megan Robertson, has been appointed Deputy Chair of the Hospital Research Director’s Forum run by Bio21 Cluster, a unique committee that represents all Research Directors in both the public and private sector across Victoria.
- Epworth has appointed our first Business Development Manager for Research, Ms Xenia Sango, who has worked diligently to increase our links with industry and hence our commercial trial activity.

The achievements and awards included in this report represent the continued dedication and hard work by all those involved in research at Epworth. We take this opportunity to thank all involved for their commitment and to congratulate them on their involvement in this exciting development.

It is with great pleasure that we welcome you to the 2013 Epworth Research Institute Research Report.
Epworth Research Institute’s aim to improve health and healthcare services through research is being realised through collaboration, advocacy and operational excellence. The Hoddle Street research precinct at Epworth Richmond is the home of the seven Epworth professorial units and the Clinical Trials and Research Centre (CTRC). This co-location of research groups enables daily interaction, improving opportunities for collaboration and cross-disciplinary research activities.

Under the leadership of Dr Megan Robertson, Executive Director of Research, the increasing success and ongoing expansion of research across Epworth is coordinated by the CTRC. The Clinical Trials and Research Centre team of highly skilled professionals provides research support services to Epworth clinicians, staff, affiliates and collaborators, assisting with a growing portfolio of investigator-initiated research programs across all eleven Clinical Institutes.

Support services are also provided to commercial organisations to undertake clinical research at Epworth. The number of commercially-sponsored clinical research trials has increased by over 35 per cent this year, with our capabilities expanding to include early-phase clinical studies in addition to those conducted in the later stages. These commercially sponsored studies provide the opportunity for Epworth patients to access state-of-the-art treatment options.

The CTRC team provides:

- A full range of clinical development services across all phases of the clinical trial life cycle
- Preparation, review and submission of applications to the Epworth Human Research Ethics Committee and ongoing governance and safety reporting
- Biostatistical advice and guidance with study design, data capture and management, and statistical analysis and interpretation
- Study feasibilities, trial budgeting and reporting
- Excellent recruitment resources for inpatient and community-based targeted populations
- Assistance in clinical trial audits
- Assistance with preparation of funding and grant proposals
- Unique site management across all Epworth campuses
- Assistance in identifying new commercial and investigator-initiated studies
- Consulting with research investigators across all phases of a research trial.

The CTRC plays a key role in the promotion of Epworth’s research activities and developments both internally and externally, and is responsible for organising research forums and events, and producing publications.
Backed by strong clinical and therapeutic expertise, a highly flexible and customised approach to clinical research is embraced, allowing clinical programs to progress quickly, safely and cost-effectively.

All research conducted at Epworth must be approved before it can commence by the Epworth Human Research Ethics Committee (HREC). Led by Reverend Professor Christiaan Mostert, the HREC is formed under the auspices of the National Health and Medical Research Council which provides leadership and advice regarding research governance in Australia. One of Epworth’s key attributes is the timely execution of research project approvals. The CTRC team works closely with the HREC coordinator to facilitate ethics submissions and approvals to ensure timely execution.

Epworth would like to thank the members of HREC for their continued dedication and support with research studies.

### HREC & Low Risk Subcommittee Submissions

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Doctors at Epworth Healthcare are embarking on an exciting world-first trial involving men diagnosed with advanced recurrent prostate cancer following previous treatment of their initial prostate cancer disease. The aim of the study is to assess the benefit of a new drug that reduces bone destruction in addition to stereotactic radiosurgery (SRS) directed to small areas of tumour spread in these men.

Dr Pat Bowden, Director of Epworth Radiation Oncology and Principal Investigator of the trial, says that of the 20,000 new cases of prostate cancer diagnosed in Australia every year, more than 3,000 men will die, so finding better ways to treat recurrent prostate cancer is crucial.

Professor Tony Costello and Dr Andrew See are co-investigators of the trial, which is conducted in collaboration with the Australian Prostate Cancer Research Centre Epworth.

“We know that prostate cancer can be cured if detected and treated while still confined to the prostate gland. If it has spread to other parts of the body, men may live for prolonged periods. What we hope to discover is whether aggressive management of small volume cancer spread (‘oligometastases’) may delay the progression of disease to a more advanced disseminated state,” says Dr Bowden.

Stereotactic radiosurgery (SRS) is a new radiotherapy technique that targets known sites of cancer spread, and has been shown to be very effective and well-tolerated when used to eradicate secondary sites of disease. Drugs to reduce bone absorption (anti-osteoclastic agents) have an established role in the treatment of disseminated prostate cancer, but their potential benefit when combined with SRS has yet to be determined.

“This two-armed, randomised trial comparing SRS combined with anti-osteoclastic therapy versus SRS alone will assess the ability of combined therapy to improve secondary tumour eradication rates, leading to better quality of life in men with advanced prostate cancer,” he says.

Dr Megan Robertson, Executive Director Research, says Epworth is committed to offering patients access to cutting-edge therapies in clinical trial settings. “We are very excited to be leading a clinical trial such as this for prostate cancer. Epworth is very fortunate to have received a significant grant ($6.4 million over four years) from the Federal Government to support the research undertaken by our dedicated team of leading medical professionals chasing one goal – to help men survive prostate cancer.”
Epworth has seven Professorial Chairs in partnership with the University of Melbourne, Monash University, Deakin University and RMIT.

Professor of Nursing

**EPWORTH DEAKIN CENTRE FOR CLINICAL NURSING RESEARCH**

The Centre for Clinical Nursing Research was established to provide academic and professional leadership to staff and students of Epworth and Deakin University. It conducts multidisciplinary, clinically-focused research across acute, rehabilitation and community settings, and seeks to promote and support the active involvement of Epworth staff in multidisciplinary research programs.

Led by Professor Mari Botti, the Centre aims to encourage and foster nursing staff and students to gain high quality clinical research training and acquire the skills required to utilise evidence-based paradigms to optimise clinical care.

The core interest of the Centre’s research program is the role of consumer engagement in the quality and safety of healthcare. The Centre’s research priorities are aligned with National Safety and Quality Health Service Standards and the global patient safety agenda, and are focused on the development of evidence relating to three dimensions of engagement:

1. The science of patient participation in care
2. Understanding user experiences of care (examining the impact of new therapies/technologies on health outcomes and in particular, patient experience)
3. Supporting the delivery of clinical care (standardisation; risk management; enabling).

**RESEARCH SNAPSHOT**

A multi-centre, randomised controlled trial to test the efficacy and cost effectiveness of an intervention to reduce carer burden and depression among caregivers of cancer patients

Caregivers of cancer patients provide extended and often unrecognised support to hundreds of thousands of Australians each year. Over two thirds of caregivers report depression and/or anxiety, and one-third report feelings of excessive burden. In the cancer field, high carer burden has been observed across three specific phases: the trauma associated with the diagnosis; the physiological impact of treatment; and the challenges of survivorship.

In collaboration with the Victorian and South Australian Cancer Councils, and funded by the National Health and Medical Research Council, this study involves developing and implementing a targeted program for caregivers, comprising screening for distress and provision of information and support. The multidisciplinary approach involves oncology nurses, oncologists, community-based Cancer Helpline nurses, GPs and psychosocial services including psychologists and counsellors, to reduce carer burden, decrease depression among caregivers and decrease the unmet needs of people with cancer.
As world-leaders in rehabilitation medicine research, the Epworth Monash Rehabilitation Medicine Unit delivers research findings that can be applied quickly and effectively to improve clinical rehabilitation programs, so that people recovering from injury or illness can maximise their quality of life, physical mobility and cognitive development.

Professor John Olver is the Victor Smorgon Chair of Rehabilitation Medicine, Monash University, Head of EMReM and Director of Rehabilitation at Epworth. Over the past four years, Professor Olver has built a busy and productive research unit that hosts multiple higher degree students in various rehabilitation associated medical and allied health disciplines including rehabilitation medicine, physiotherapy and speech therapy. In the past 12 months, the EMReM team has published 21 peer-reviewed publications and book chapters, and Professor Olver has supervised five PhD and two Masters’ students at varying stages of their research.

Within EMReM, Dr Gavin Williams, who currently holds an NHMRC post-doctoral research fellowship, leads a strong research program in physiotherapy to assess and optimise rehabilitation programs post-trauma and post-surgery.

**Research Snapshots**

**Application of the WHO-International Classification of Impairment, Activity Limitation and Participation in outcomes assessment in hip and knee arthroplasty**

Osteoarthritis and the ageing population mean that joint replacement is becoming more frequent across the Western world. This study aims to critically evaluate the current measurement scales used to assess function in patients undergoing hip and knee joint replacement and to assess what factors are critical in influencing clinical outcomes. This will assist in measurement and standardisation of assessment, enabling effective comparison of treatment options into the future.

**An Australian study investigating the influence of age on functional outcomes in hospitalised patients following a traumatic brain injury**

The purpose of this study is to compare differences in functional outcome of patients aged 18–40 years old to patients aged 65 years and over, who have been admitted to Epworth Rehabilitation following a traumatic brain injury (TBI). This study aims to identify the prognosis after TBI in people 65 years and over which will aid in long-term management plans that will be important given the ageing population in Australia.
Erwirth Victor Smorgon Chair of Medicine

Neurology research at Erwirth includes a broad range of projects in stroke, transient ischaemic attack, thrombolysis implementation, and vestibular disease. Professor Richard Gerraty is the Erwirth Victor Smorgon Chair of Medicine, Monash University. As a consultant neurologist with a special interest in stroke management research, Professor Gerraty has participated in major international and national collaborative clinical studies and local projects investigating minor stroke and transient ischaemic attacks. He has a broader interest in vertigo presentations to the emergency department.

As part of his academic program, Professor Gerraty has supervised four Bachelor of Medical Science students from Monash University with two more students commencing in 2014.

Professor Gerraty is Chairman of the Australasian Stroke Unit Network, part of the prominent Leadership Group of Victoria’s Stroke Clinical Network of the Department of Health, and is a member of the Council of the Australian and New Zealand Association of Neurologists.

His goal is to increase stroke and neurology research at Erwirth, including participating in important investigator-initiated multi-centre studies, and developing new collaborations across Erwirth sites.

Erwirth continues to build world-class stroke research programs that will enable provision of the best treatment for patients.

RESEARCH SNAPSHOT

CADDIS study into antithrombotic therapy
Clinical trials in stroke include the London-based Cervical Artery Dissection in Stroke Study (CADDIS) study of antithrombotic therapy in extracranial arterial dissection. This study concluded mid-year following the feasibility phase.

STAR-EXTEND and STAR-PrePARE study
Other studies include two Melbourne-based studies:
1. START-EXTEND – an important study to assess the benefit of acute clot thrombolysis up to 9 hours post onset of stroke symptoms, compared to 3 hours as currently recommended. This would allow more patients to be treated in the acute window.
2. STAR PrePARE – involves advanced MRI studies to identify predictions of depression and functional outcome after stroke.

Epworth Victor Smorgon Chair of Surgery

Professor Richard de Steiger is the Erwirth Victor Smorgon Chair of Surgery, The University of Melbourne. Professor de Steiger is an orthopaedic surgeon with a special interest in hip and knee joint replacement, and the management of adult hip disorders. He is also Chairman of Erwirth’s Musculoskeletal Clinical Institute and Deputy Director of Australian Orthopaedic Association National Joint Replacement Registry. During the last three years, the Department of Surgery has continued to define the objectives and goals for surgical services, ensuring commitment to patient care, teaching, audit and research.

In 2012/13, the Erwirth Musculoskeletal Research Centre was established in the Hoddle Street Research Precinct. Research at the Centre will explore the underlying causes of osteoarthritis in Australian patients, aiming to identify novel targets for new therapies.

The Centre will build on important collaborations with research partners at the University of Melbourne, and will establish a tissue bank to provide data and samples for an ongoing research program to investigate osteoarthritis, a disease that affects more than 1.3 million Australians.

RESEARCH SNAPSHOT

Benchmarking the outcomes of Erwirth’s total joint replacement program against national data
Erwirth is one of the largest providers of joint replacement surgery in Australia, performing more than 1400 knee and hip replacement operations each year. To monitor the success of these procedures, Erwirth participates in the National Joint Replacement Registry established by the Australian Orthopaedic Association in 1999.

The key measure recorded by the Registry is ‘time to first revision’. Erwirth has benchmarked its performance against the national results for all hip and knee joint replacement surgery performed since 2003.

Over this period, there were more than 4200 primary conventional hip replacements performed at Erwirth. Also, there were more than 3200 primary total knee replacements. The revision rates for both hip and knee replacement at Erwirth over this 10 year period were consistent with the national rates. These results will form the basis for further study.
Professor of Psychology

MONASH EPWORTH REHABILITATION RESEARCH CENTRE

The Monash Epworth Rehabilitation Research Centre aims to conduct research in trauma rehabilitation with a view to reducing long-term disability. Established in 2000, the Centre is tracking more than 2000 patients over 20 years following a traumatic brain injury.

Professor Jennie Ponsford is the Director of the Monash-Epworth Rehabilitation Research Centre. Professor Ponsford and her team collaborate locally, nationally and internationally with other trauma research groups. Five other psychologists work part-time in the Centre to form a dynamic research team.

A world leader in her field, Professor Ponsford has spent more than 30 years as a clinician and researcher characterising the problems and developing effective treatments associated with traumatic brain injuries (TBI). She and her team of researchers and doctoral students have investigated outcomes following mild, moderate and severe TBI and factors predicting outcome, including genetic, age and injury-related factors.

In 2013, Professor Jennie Ponsford was awarded the Robert L. Moody Prize for Distinguished Initiatives in Brain Injury Research and Rehabilitation. The Robert L. Moody Prize is an American award that has only once before been awarded to a non North American.

The award, based on Professor Ponsford’s considerable body of work and program development throughout her career, was presented during the Galveston Brain Injury Conference in Galveston, Texas.

Professor/Director of Dermatology

Professor Rodney Sinclair has commenced a joint appointment with Epworth and the University of Melbourne as the Director of Dermatology. Professor Sinclair has extensive research experience across a broad range of dermatology conditions, with specific interest in autoimmune diseases of skin and hair, skin cancer, psoriasis, genetic skin disorders and skin stem cell biology.

Professor Sinclair is a past President of the Australian Society for Dermatological Research and the Skin and Cancer Foundation of Victoria.

At Epworth, he conducts clinical research into a wide variety of skin conditions including psoriasis and skin cancer prevention, which is mainly undertaken on an outpatient basis.

In addition to commencing clinical trials at Epworth, Professor Sinclair has established a skin and stem cell laboratory at the Hoddle Street research precinct and works collaboratively with other co-located laboratory-based research groups, including the Australian Prostate Cancer Research Centre Epworth. Associate Professor Leslie Jones and Dr Nicholas Rufaut are based at the Hoddle Street dermatology laboratories, and undertake research into stem cell biology, regenerative medicine and gene discovery.

RESEARCH SNAPSHOT

Safer roads to recovery: assessing readiness for driving after traumatic brain injury

More than two-thirds of people following traumatic brain injury (TBI) return to driving. Despite this, limited research investigating driving performance following TBI has been conducted.

The aims of this collaborative study, funded by the Victorian Neurotrauma Initiative and Ontario Neurotrauma Foundation, are to examine the nature and causes of driving difficulties following TBI as a basis for developing more reliable and valid assessment procedures for readiness to return to driving. The research will guide the development of more sensitive driving evaluation procedures including cognitive screening and simulated and on-road assessment.

Anatomical study of the arrector pili muscle in normal and diseased hair

The arrector pili muscles are small muscles that link hair follicles to the surrounding skin and make the hairs stand erect when cold, known as goose bumps. These muscles connect to the hair follicle at a stem cell compartment known as the ‘bulge’. Professor Sinclair’s team is investigating the role of arrector pili muscle loss in hair loss disorders. Importantly, in androgenetic alopecia, or male pattern baldness, the arrector pili muscle degenerates and is replaced by fat tissue whereas in temporary hair loss conditions, it is not lost and the hair can be readily restored. This finding may have important implications when considering possible treatment options for hair loss conditions.
Professor of Health Information Management

Professor Nilmini Wickramasinghe is the Epworth Chair of Health Information Management, RMIT University. Her research helps define and develop relevant health informatics research projects within the Epworth environment. It has been a very busy and productive year for the Health Information Management group. A key highlight for 2012/13 was securing of a Grand Challenges Explorations Grant set up by the Bill & Melinda Gates Foundation for the research project on using a mobile solution to monitor and manage tuberculosis in Kenya, with Professor Wickramasinghe as one of the Chief Investigators.

At the 14th World Congress on Medical and Health Informatics in Copenhagen, Denmark, Professor Wickramasinghe received the distinguished poster presentation award for her poster on this project.

The leading priority areas in health informatics include:
- Mobile and web 2.0
- Big data
- Real time clinical decision support solutions
- Service-oriented architecture.

Research within the health information management group at Epworth focuses extensively in these areas supporting the pursuit of research in leading areas of health informatics today.

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Research within the health information management group at Epworth focuses extensively in these areas supporting the pursuit of research in leading areas of health informatics today.
A key role of the Epworth Research Institute (ERI) is to provide health professionals with the necessary skills needed to undertake high quality clinical research. It is essential for research knowledge and outcomes to be translated into clinical practice and effectively communicated to all healthcare providers.

Research Week
The ERI hosts a successful Research Week each year, showcasing many of the clinical research projects being undertaken within Epworth and in collaboration with many of its academic and research partners.

The program, held in May 2013, included breakfast and lunch sessions highlighting Epworth research and local clinical research experts as guest presenters, research seminars and a benefactors’ session. A large number of research posters were received and displayed.

The early career research poster prize was jointly awarded to Ms Megan Hamilton for her poster entitled ‘Which factors influence the physical activity levels of people with traumatic brain injury when they are discharged home from hospital?’ and Ms Mary Hawkins for ‘Learning transfer outcomes of an introduction to critical care nursing education program’.

The established research poster prize was presented to Mr Os Cotta for the second year running, for his research entitled ‘Use of quarterly point prevalence surveys to assess appropriateness of antimicrobial prescribing at Epworth HealthCare’.

Exceptional presentations and workshops were delivered during the week, attracting record numbers of participants.

Presentations included:
- Return to sport following anterior cruciate ligament reconstruction: are we as good as we think?
  - Associate Professor Julian Feller
- Clinical trials in neurorehabilitation: a focus on strength & mobility
  - Dr Gavin Williams
- Renal denervation for resistant hypertension 2013: the end of the beginning Professor Murray Elder
- The Prostate Cancer Registry – huge change in patterns of care in Victoria
  - Associate Professor Declan Murphy
- Cabini Monash Colorectal Database: a successful model for clinician-led national data collection
  - Associate Professor Paul McMurrick
- Australian Clinical Trials Research Forum
  - For the first time during Research Week, the ERI held a clinical research forum: ‘Australian Clinical Research – Putting Our Best Foot Forward?’ The forum included speakers from government, industry and Epworth who discussed the global competitiveness of the Australian clinical research landscape, supporting the environment within which clinical trials operate and what it really takes to get a drug/therapy to market.
  - Dr Maria Jenelyn (Jen) Alviar
- Immediate post-operative outcomes following minimally invasive lumbar fusion
  - Mr Paul D’Urso
- Death – loss of the premiership
  - Associate Professor Michele Levinson

Research Week sponsors
Epworth Research Institute acknowledges the generosity of the following sponsors who contributed to the success of Research Week 2013:

- Abbott Vascular
- Covidien
- Medtronic Australasia
- Melbourne Pathology

Epworth research events
The ERI also hosted regular events throughout the year to showcase the research being conducted at Epworth. This included Research Breakfasts and the Grand Rounds Program. These events were held at the Epworth Richmond auditorium with videoconferencing to Epworth Eastern, Epworth Freemasons and Epworth Cliveden.

Presentations included:
- Application of the WHO International classification of functioning, disability and health in hip and knee arthroplasty rehabilitation outcomes assessment
  - Dr Maria Jenelyn (Jen) Alviar
- Death – loss of the premiership
  - Associate Professor Michele Levinson
This is the third year of the Epworth Research Institute Grant awards. In 2013 there were nine projects funded totalling more than $220,000, an increase of 45 per cent on the previous year.

ERI Grant recipients 2013

DR LAURENCE SIMPSON
$50,000

‘An innovative screening device for detection of lower limb abnormality after surgery: DVtect’

The risk of deep vein thrombosis (DVT), a significant complication of hospitalisation, is high for all patients, particularly for patients who have undergone joint arthroplasty. These patients have a high risk due to their age, the nature of the surgery and immobility. Currently, diagnosis and treatment of DVT is problematic as there is no recognised clinical assessment that has accuracy greater than 60 per cent as patients may have no overt findings on clinical examination. This study is designed to estimate the ability of an innovative, convenient and low cost screening device ‘DVtect’ to detect lower limb vascular abnormality, which includes DVT. If the screening device meets expectations, it can have immediate implications for improved clinical management of, and outcomes for, patient groups susceptible to DVT. This study will test the device in patients undergoing knee arthroplasty, a population of patients known to be at high risk for DVT and likely to receive benefit if successful.

PROFESSOR NILMNI WICKRAMASINGHE
$49,996.50

‘A feasibility assessment of an intelligent care support tool for acute healthcare delivery’

Nurses are the largest group of healthcare professionals in hospitals, providing 24-hour care to patients. Nurses are pivotal in coordinating and communicating patient care information in the complex network of healthcare professionals, services and other care processes. But despite their central role in healthcare delivery, intelligent systems have rarely been designed around nurses’ operational needs. SmartWard™, an Australian small medium enterprise, has developed such a system. This study examines the feasibility of this intelligent care support tool to assist nursing care at Epworth. It will be tested in a simulated environment, thereby also enabling the development of protocols for testing IT solutions in the SIM Centre.

DR PATRICK BOWDEN
$35,700

‘Ablative management of oligometastatic prostate cancer (<5 sites) following prior local treatment with or without short-term androgen ablation: randomised comparison (MOP IT Trial)’

Prostate cancer is diagnosed in 20,000 Australian men per annum, of which 3,000 will eventually die of advanced disease. Despite being incurable, men with metastatic disease may live for prolonged periods. Furthermore, the aggressive management of limited volume metastatic disease ‘oligometastases’ may delay the progression of disease to a more advanced widely poly-metastatic stage. Stereotactic radiosurgery (SRS) targeting known sites of metastatic disease has been shown to be a very effective and well-tolerated approach when used to eradicate secondary sites of disease. Whereas the addition of short-term androgen deprivation therapy (ST-ADT) to conventional radiation has an established role, the potential benefit of ST-ADT when combined with SRS has yet to be determined. This trial is the first ever randomised controlled trial designed to explore whether ST-ADT when combined with SRS may improve local tumour eradication rates subsequently leading to better quality of life outcomes in men with advanced prostate cancer.

DR ADAM MCKAY
$32,418

‘The efficacy of early rehabilitation after traumatic brain injury (TBI)’

Traditionally rehabilitation in traumatic brain injury (TBI) has been delayed until after emergence from post-traumatic amnesia (PTA), a period of confusion following coma, in order to minimise agitation and maximise learning potential. However this practice has never been evaluated. This may miss the potential to make earlier rehabilitation gains. This pilot randomised controlled trial will examine the efficacy of providing training in activities of daily living (ADL) to TBI patients still in PTA compared to introducing ADL training after PTA (treatment as usual control).

DR PHILIP SMART
$27,824

‘Thrombogenic risk profile of gastrointestinal cancer patients undergoing chemo- and/or radiotherapy; with or without surgical resection: a multi-centre prospective observational study’

This study will determine the incidence of symptomatic thromboembolism (TE) and asymptomatic TE (detected on radiological surveillance as part of routine patient care and assessment) in adult (>18 years) patients with gastrointestinal cancer who undergo anticancer therapy including definitive chemoradiotherapy, chemotherapy, radiotherapy and or biological agents with or without surgical intervention. It will measure thrombogenic biomarker assays throughout phases of treatment, and assess associations in clinical measures and change in thrombogenic biomarker assays throughout phases of treatment with development of TE to develop a risk profile across patient populations and exposure.
PROFESSOR RODNEY SINCLAIR
$10,000

‘Keratin intermediate filaments in scaffold/matrix production for improved cell growth in vitro’

Tissue engineering commonly involves the use of scaffolds that can be used to turn monolayers of stem cells into highly organised 3-dimensional tissues. In their native form, keratin intermediate filaments (IF) have unique structural integrities, mechanical properties, and others like biocompatibility, conductivity and immunotolerance that make them an excellent candidate for use as a scaffold material. The demonstration of a central core in the hard keratin IF supports the concept of them being true bio-nanotubes. The study will propose continued investigations using keratin IF as templates for cell growth and tissue scaffolds. This study will be undertaken to show the capacity of keratin IF films to support primary cell growth in vitro.

PROFESSOR RICHARD DE STEIGER
$10,000

‘Is there an increase in the presence of granulocyte macrophage-colony stimulating factor (GM-CSF) within synovial tissue of patients having surgery for osteoarthritis (OA) compared to a group of age matched controls without OA?’

Osteoarthritis (OA) is the most common form of arthritis, causing disability and chronic pain. While joint replacement is effective for end stage disease there are no therapies to adequately deal with disease progression and pain. Recent work has shown that granulocyte macrophage-colony stimulating factor (GM-CSF) is increased in the synovial tissue of OA patients compared to non-OA patients. A mouse animal model has shown that suppression of this inflammatory mediator reduces pain. This study aims to collect synovial tissue from OA patients and controls to examine the effect of GM-CSF blockade on cell populations derived from this tissue. The study aims to develop an effective antibody therapy for pain and OA disease progression.

MS MAL BUTLER
$7,646

‘Overseas travel and infection after Trans Rectal Ultrasound (TRUS) guided biopsy’

Is there a link between overseas travel and quinolone-resistant organisms in patients undergoing TRUS prostate biopsy?

This study will answer this question by prospectively surveying 500 men undergoing TRUS prostate biopsy at Epworth. A phone questionnaire will be administered 28 days post procedure to determine whether or not subjects had travelled overseas within six months of their biopsy; countries visited; and consumption of antibiotics within four weeks of their biopsy. The characteristics of the patients and the types of infections will be summarised and relative risks of infection calculated. Infection and sepsis after TRUS prostate biopsy are common causes of hospital readmission estimated at 1 to 2 per cent, this is believed to underestimate the rate. Based on the findings the team expects to recommend changes to admission history data collected and preparative antibiotic prophylaxis.

MS MELANIE DRUMMOND
$2,740

‘The consequences of olfactory impairment following traumatic brain injury (TBI)’

This project is a longitudinal study. It consists of three phases which will result in the development of a ‘best practice’ protocol for reliable screening for the presence of post-traumatic anosmia (olfactory impairment) in individuals who have sustained a traumatic brain injury (TBI). Phase 1 will identify the prevalence of anosmia following TBI in a consecutive sample of adults admitted to the Brain Injury Rehabilitation Program at Epworth. Phase 2 will investigate the natural progression of post-traumatic anosmia during recovery from a traumatic brain injury over two time periods (6 and 12 months post injury) with respect to its severity and consequences in an individual’s everyday life. Phase 3 will identify acute factors that are associated with long term olfactory outcome.

The study involved 50 Epworth patients to evaluate acute procedure safety and change in office blood pressure from baseline to six months.

Epworth was one of just four sites involved in the successful completion of a feasibility study for a next-generation renal denervation system for treatment-resistant hypertension in 2013.

The system developed by Medtronic, features a simultaneously firing multi-electrode catheter and advanced radio-frequency (RF) generator. Clinicians from Australia and New Zealand are the only ones to have trialled the device, which is anticipated could take the procedure to the next level by providing the flexibility to treat a wide range of different anatomies, as well as helping to improve efficiency of care through significantly reduced ablation and procedure times.

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Renal denervation therapy is a minimally invasive, catheter-based procedure that modulates the output of nerves that line the walls of the arteries leading to the kidneys. These nerves impact the sympathetic nervous system, which affects the major organs that are responsible for regulating blood pressure: the brain, the heart, the kidneys and the blood vessels. This procedure is widely recognised as an important advancement in the management of treatment-resistant hypertension.

The next-generation system used in the study features a new four-electrode catheter (as opposed to a single-electrode) that delivers RF energy simultaneously and is designed to significantly reduce blood pressure time during renal denervation procedures.

From the patient’s perspective

‘I took part in the MERF study starting 4th February 2013. I have had high blood pressure for over 20 years. Although I was on various medications – up to 10 tablets per day – nothing seemed to help and I also developed cardiomyopathy. It was suggested to me by Dr Paul J de Crespiqny, my nephrologist, that I may benefit from renal denervation. Dr Tony Walton met me at Epworth and, after various tests, suggested that I would be a good candidate.

‘The change was immediate and my blood pressure dropped noticeably. I am no longer tired and don’t need a rest midday. I can now walk more than about 100m without stopping, and have reduced my medication. I recently returned from overseas – this was only a wish before the procedure.

‘Renal denervation has given me a second chance. I feel much healthier both physically and mentally, and I am looking forward to at least another 20 years. My thanks go to Epworth and its research staff for allowing me into the trial and nurturing me throughout the process.’

Patient RB

WORLD-FIRST RENAL DENERVATION AT EPWORTH

‘Renal denervation’ is a minimally invasive procedure that diverts abnormal impulses from the brain to the kidneys to control blood pressure. The procedure involves placing a catheter into a large blood vessel in the thigh and using a radio-frequency device to destroy the artery nerves. The procedure is effective for end stage disease there are no therapies to adequately deal with disease progression and pain. Recent work has shown that granulocyte macrophage-colony stimulating factor (GM-CSF) is increased in the synovial tissue of OA patients compared to non-OA patients. A mouse animal model has shown that suppression of this inflammatory mediator reduces pain. This study aims to collect synovial tissue from OA patients and controls to examine the effect of GM-CSF blockade on cell populations derived from this tissue. The study aims to develop an effective antibody therapy for pain and OA disease progression.

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Patient RB
**RESEARCH GRANT PROGRESS REPORT 2012/13**

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**PROFESSOR JULIAN FELLER $50,000**  
*Factors influencing long-term outcome of anterior cruciate ligament reconstruction*

Recruitment of participants is underway. Given the long-term nature of the project, the team has been focused on resolving issues before recruiting the first patient. The team has been fortunate to receive very generous support from an anonymous Epworth Medical Foundation donor.

The research team has established further contacts and potential collaborators, particularly in the genetics field. In addition, some methodological issues such as which biomarkers to measure and how to radiologically document graft tunnel positions have been clarified through discussion with other researchers. The team has also established online tools for data acquisition that will facilitate patients’ participation. The aim is to have recruited the first 100 patients by mid 2014.

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**MS ALICIA DYMOWSKI $49,949**  
*An investigation of the efficacy of longer term use of methylphenidate following traumatic brain injury*

In the largest clinical trial with methylphenidate conducted, the investigators previously found that methylphenidate improved speed of thinking when administered over two weeks in the acute rehabilitation phase following traumatic brain injury (Willett et al., 2008).

The current study is the first study to investigate the efficacy of the long acting preparation of methylphenidate (Ritalin LA®) in alleviating attention deficits seen after traumatic brain injury. It is also the first to investigate the efficacy of extended administration of methylphenidate to TBI patients with attention difficulties, and the long-term associated benefits. The clinical trial is currently ongoing.

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**PROFESSOR RODNEY SINCLAIR $20,000**  
*New targets for basal cell carcinoma.*

This project addressed the role of the stroma in supporting the invasive growth of basal cell carcinoma (BCC) of the skin. Stromal tissue surrounds the neoplastic epithelial tumour cells and regulates their growth. Regulation of epithelial cell behaviour by stromal cells also occurs in normal hair growth and hair follicle cycling. The aim of this project was to test whether signalling molecules involved in stromal-epithelial signalling in hair follicles are also implicated in basal cell carcinogenesis.

Several distinct subtypes of BCC are known, which differ in their invasiveness. Four BCC subtypes were compared, to determine whether expression of signalling molecules correlates with invasiveness.

The most extensively studied molecule was versican, an extracellular matrix proteoglycan. Four isoforms of versican are known, encoded by different mRNA splice variants. Versican expression in the four BCC subtypes was characterised by both immunohistochemistry and quantitative polymerase chain reaction (PCR). Versican expression was localised to the stroma of BCC, and was progressively more abundant in increasingly invasive tumour subtypes. All four isoforms showed increased expression by quantitative PCR.

Other molecules investigated include Wnt3a, Wnt7a, FGF7, and BMP6. In quantitative PCR assays, Wnt3a, Wnt7a and FGF7 were down-regulated in all four BCC subtypes compared to normal skin. Results from this project have been included in the following conference presentation:


In a follow-on project, versican expression will be chemically inhibited in a series of tissue culture experiments, to test whether stromal expression of versican has a causative role in regulating behaviour of associated tumour cells.
Patients in PTA commonly experience disturbance of their sleep wake cycle (circadian rhythm) and sleep architecture (components/patterns of sleep), however this has not been well documented in the literature.

In light of this, a pilot study commenced in 2012, observing these facets of sleep in patients in PTA following a moderate to severe TBI. The primary objective is to collect essential information in a small cohort to allow the design of a larger scale study. Since its commencement, this study has focused on participant recruitment and data management planning. To date, this pilot study has recruited and collected complete data for five participants out of the anticipated 10–12 participants. Given the pilot nature of this study, this demonstrates success in utilising novel instruments (e.g. portable EEG) for this population group. Investigators have also liaised with a biostatistician and are planning how to appropriately collate the data. Preliminary results have been promising, with participants displaying altered melatonin levels (a hormone required to regulate sleep) and diminished deeper components of sleep.

The aim of this project was to develop the final list of activities and response format of the Brachial Assessment Tool (BRAT) using the current gold standard of scale development, Rasch analysis. The funds granted were used for recruitment and data analysis. The BRAT is a self-report questionnaire designed to assess everyday activities that are performed by and are important to adults with a traumatic Brachial Plexus Injury. To develop the BRAT, the aim was to recruit a minimum of 108 adults who have sustained a traumatic Brachial Plexus Injury from four centres across Australia, and to undertake Rasch analysis of the results. The centres were The Alfred Hospital, the Melbourne private practice of Mr Scott Ferris, a Plastic and Reconstructive surgeon, The Royal Melbourne Hospital and the Hand and Upper Limb Centre in Perth, a private hand therapy practice. To further broaden the recruitment base, Ms Hill is investigating the possibility of a research collaboration with the Mayo Clinic and Cleveland Clinic in the USA.

To date, 72 patients have been recruited (70 per cent of the total number of participants required for the study). Fifty-two per cent (n=33) have completed two sets of data collection – at recruitment and nine months – to evaluate the responsiveness of the BRAT. Ten of these participants are currently completing their final data collection at 18 months. Twenty-seven per cent (n=17) have completed data collection to evaluate test retest of the BRAT, i.e. at recruitment and two weeks. A further twenty-one per cent (n=13) have completed one data set of data and the remainder have consented but not completed any data to date. It is envisaged that patient recruitment will be complete in early 2014.
Epworth Medical Foundation supports the work of the Epworth Research Institute through fundraising. The Foundation raised in excess of $1 million in 2012/13 to support research activities, via donations from supporters, grants from Trusts and Foundations, and from the proceeds of the Epworth Gala Ball. Over 1300 guests helped Epworth raise more than $1 million at this black tie event towards the research corpus, which is now over half way towards reaching the target of $10 million by 2015. The research corpus is used to fund the annual ERI grants, which allow researchers associated with Epworth to progress their research activities, purchase equipment, or undertake travel to network with peers via national and international conferences. Epworth Medical Foundation will continue to raise funds and provide assistance to researchers to help realise ERI’s vision to lead private health research through collaboration, advocacy and excellence.

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A world leading program investigating the nature and extent of walking disorders following traumatic brain injury has identified that muscle weakness, rather than balance disorders and muscle spasticity, is the primary problem limiting patients’ capacity to walk. These findings, which have been made as a result of research conducted at Epworth Richmond’s physiotherapy department, have led to a current trial aimed to determine whether strength training leads to improved ability to walk. As part of the strength training trial, Epworth physiotherapists Gavin Williams and Michelle Kahn conducted a large systematic review into current models for exercise in people with neurological problems such as brain injury, stroke or cerebral palsy. The main findings demonstrated that most previous strength training trials had failed to test and strengthen the most important muscle groups required to improve walking. These findings have been recently published and will have a major influence on how strength training is conducted in neurological rehabilitation. An exciting new area of research has been the trialling of new game-based technologies in rehabilitation. The department has been using Wii and Xbox Kinect in the assessment of neurological patients’ movement and balance disorders. This technology is able to perform assessments in real time and provide immediate feedback on a patient’s performance. They provide information which is comparable to that obtained from expensive laboratory based testing which is usually inaccessible for our clients. The team envisions that this technology will become a routine part of Epworth rehabilitation patients’ assessment and screening.

Gavin Williams is a Specialist Neurological Physiotherapist, a Senior Physiotherapist and NHMRC Research Fellow.

The Epworth study identified that muscle weakness, rather than balance disorders and muscle spasticity, is the primary problem limiting patients’ capacity to walk.
Research Projects 2012/13

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<td>Critically ill obstetric patients: a retrospective review of 10 years experience in a private intensive care unit</td>
<td>Dr Megan Robertson</td>
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<td>Defining the impact of different assisted reproduction technology (ART) protocols on the placental epigenome</td>
<td>Dr Stefan White</td>
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<td>Developing and validating a new articular cartilage material model</td>
<td>Professor Richard de Steiger</td>
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<td>Developing recommendations for the design and implementation of clinical technology solutions in the context of multiple and different users; the case of a clinical oncology system</td>
<td>Professor Nilmini Wickramasinghe</td>
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<td>DEXA analysis of conventional rigid vs elastic uncemented acetabular cups</td>
<td>Professor Richard de Steiger</td>
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<td>Dialysis outcomes &amp; practice pattern study 2012–2015</td>
<td>Dr Benno Ihle</td>
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<td>Do endometrial stem/progenitor cells have a role in preparing a receptive endometrium?</td>
<td>Dr Caroline Gargett</td>
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<td>Docetaxel in very elderly men with castrate-resistant prostate cancer: a retrospective review</td>
<td>Dr Philip Parente</td>
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<td>Does inpatient rehabilitation decrease caregiver strain among caregivers of patients with stroke or brain injury in the community? A prospective controlled observational study of the prevalence of caregiver strain following inpatient rehabilitation of patients with brain tumour or stroke: a pilot study</td>
<td>Dr Pearl Chung</td>
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<td>Does physical ability influence the activity levels of people with traumatic brain injury when they are discharged home from hospital</td>
<td>Dr Gavin Williams</td>
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<td>Dosimetric comparison: Acuros vs AAA</td>
<td>Mr Leo El Hage</td>
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<td>E-risk detection to support clinical decision making in the context of THA and TKA</td>
<td>Professor Nilmini Wickramasinghe</td>
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<td>Early breast cancer and vitamin D levels</td>
<td>Ms Marisa Stevens</td>
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<td>Efficacy of attention training and methylphenidate in traumatic brain injury rehabilitation</td>
<td>Professor Jennie Ponsford</td>
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<td>Efficacy of cognitive behaviour therapy for sleepiness and fatigue following traumatic brain injury</td>
<td>Professor Jennie Ponsford</td>
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<td>ENGAGE: Endurant Stent Graft Natural Selection Global postmarket registry – A multi-centre post-market non-interventional prospective study</td>
<td>Professor Michael Grigg</td>
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<td>Epworth Antimicrobial Stewardship Initiative – implementing the Guidance system</td>
<td>Dr Megan Robertson</td>
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### Research Projects 2012/13

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<td>Mr Robert Lumsden</td>
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<td>Intervening with an intragastric balloon to induce weight loss and reverse type 2 diabetes</td>
<td>Dr Spiros Fourlanos</td>
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<td>Investigating the nature of the circadian sleep wake cycle and sleep architecture in patients in post-amnesia following traumatic brain injury: a pilot study</td>
<td>Ms Bianca Fedele</td>
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<td>Investigating the relevance of information provided to the next-of-kin during family meetings for patients with acquired brain injury</td>
<td>Dr Brinda Thirugnanam</td>
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<td>Is strength or balance training more effective for improving mobility following traumatic brain injury?</td>
<td>Dr Gavin Williams</td>
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<td>Learning curve, safety and positive margin rates of robotic prostatectomy in Australia – the Epworth experience</td>
<td>Mr Daniel Moon</td>
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<td>Longitudinal Head Injury Outcome Study – an observational study</td>
<td>Professor Jennie Ponsford</td>
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<td>Management of severe vitamin D deficiency in pregnancy</td>
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<td>Measuring outcomes in rehabilitation following hip and knee arthroplasty: developing &amp; validating a tool based on the International Classification of Functioning, Disability &amp; Health (ICF) Comprehensive Core Set for Osteoarthritis (OA)</td>
<td>Professor John Olver</td>
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<td>Multi-centre randomised active-controlled efficacy and safety study comparing extended duration betaxatinab with standard of care enoxaparin for the prevention of venous thrombosis in acute medically ill patients</td>
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<td>Multi-electrode radiofrequency renal denervation system feasibility study</td>
<td>Dr Tony Walton</td>
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<td>Neonatal alloimmune thrombocytopenia registry</td>
<td>Dr Louise Phillips</td>
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<td>Non-malignant palliative care in the private hospital setting</td>
<td>Dr Rachel Delahunty</td>
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<td>Observational study of patient management with Oralair in subjects with allergic rhinoconjunctivitis</td>
<td>Dr Joanne Smart</td>
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<td>Orbera Managed Weight Loss System intragastric balloon device outcomes registry</td>
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<td>Outcomes of the very elderly after intensive care admission: a 10-year survey</td>
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<td>Participating in education. The student perspective. Understanding the experiences of students returning to secondary and tertiary education following traumatic brain injury and their mainstream student peers</td>
<td>Ms Margaret Mealings</td>
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<td>Patient participation in postoperative care activities; improving the patient experience</td>
<td>Professor Mari Botti</td>
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<td>Patient participation in symptom management in acute care settings: an international cohort comparison (pilot) study</td>
<td>Professor Mari Botti</td>
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<td>Patients’ and families’ experiences of the transition from hospital to inpatient rehabilitation: a social work perspective</td>
<td>Ms Elaine Talbot</td>
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<td>Pedobarographic and clinical outcomes after minimally invasive distal metatarsal metaphyseal osteotomy (DMMO) for the treatment of metatarsalgia</td>
<td>Dr Harvinder Bedi</td>
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<td>Phase II neo-adjuvant study of ‘super-castration’ with combination Degarelix, Abiraterone, Bicalutamide &amp; Prednisolone in high-risk localised prostate cancer</td>
<td>Dr Niall Corcoran</td>
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<td>Phase II randomised placebo-controlled study to evaluate the efficacy of topical pure emu oil for arthritic pain related to aromatase inhibitor use in postmenopausal women with early breast cancer: JUST Joints Under Study</td>
<td>Dr Richard de Boer</td>
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<td>Physiotherapeutic activity in the Acquired Brain Injury Unit</td>
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<td>Pilot of a lung cancer clinical quality registry</td>
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<td>Pilot of a population-based prostate cancer clinical registry</td>
<td>Associate Professor Declan Murphy</td>
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<td>Piloting an anger management program for clients with traumatic brain injury: a case series</td>
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<td>PrePARE – Prediction and prevention to achieve optimal recovery endpoints after stroke</td>
<td>Professor Richard Geraty</td>
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<td>Prevalence of patients at risk of a medical emergency in the acute care setting at Epworth Eastern</td>
<td>Ms Leanne Stelia</td>
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<td>Procalcitonin Guided Antibiotic Rational Decision Making in ICU – ProGUARD-ICU</td>
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<td>Prolonged overt obscure gastrointestinal bleeding – a tertiary centre retrospective audit</td>
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<td>Prophylactic intra-aortic balloon counter-pulsation in high risk cardiac surgery; an inception cohort study</td>
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<td>Psychosocial nursing interventions for patients with cancer</td>
<td>Professor Mari Botti</td>
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<td>Radiotherapy in recurrent ovarian and tubal cancer: long term outcomes</td>
<td>Associate Professor Robert Rome</td>
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<td>Rectal volume analysis in prostate radiation therapy: volumetric or orthogonal IGRT</td>
<td>Mr Louis Huynh</td>
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<td>Reference range in the video head impulse test (VHIT)</td>
<td>Professor Richard Gerraty</td>
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<td>Registry observing Endobarrier treatment outcomes in subjects with type 2 diabetes and/or obesity</td>
<td>Mr Harry Frydenberg</td>
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<td>Renal denervation for refractory hypertension</td>
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<td>Retrospective comparative analysis of glycaemic control in two large private ICUs in Melbourne</td>
<td>Dr Vineet Sarode</td>
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<td>Retrospective evaluation of fusion rates and complications following use of bone morphogenetic proteins in spine surgery</td>
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<td>Retrospective review of outcomes after total knee replacement using the Zimmer system of specific blocks</td>
<td>Mr Robert Steele</td>
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<td>Retrospective study of TIA and minor stroke</td>
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<td>Right sided adenoma detection with retroflexion versus forward viewing colonoscopy</td>
<td>Dr Marios Efthymiou</td>
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<td>Safety of oral minoxidil in female and male pattern hair loss</td>
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<td>SMILE (SM101 in Lupus Erythematosus)</td>
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<td>Smartward: developing and testing concepts in the clinical arena</td>
<td>Professor Bridie Kent</td>
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<td>Stroke Imaging Prevention &amp; Treatment (START) Extending the time for Thrombolysis in Emergency Neurological Deficits (EXTEND)</td>
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<td>Stromal-epithelial interactions in prostate disease</td>
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<td>The Australasian Society of Cardiac &amp; Thoracic Surgeons National Cardiac Surgery Database Program</td>
<td>Mr Peter Skillington</td>
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<td>The efficacy of early rehabilitation after traumatic brain injury</td>
<td>Professor Jennie Ponsford</td>
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<td>The influence of adjunctive therapy on outcome following BoNT-A injection for focal spasticity in adults with neurological conditions</td>
<td>Ms Elizabeth Moore</td>
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<td>The lifestyle and genetic risk factors for prostate cancer study</td>
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<td>The priming effect: how decisions surrounding in vitro fertilisation can be manipulated</td>
<td>Ms Ashlee Field</td>
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<td>The relationship between shift work schedules, work environment and nurse health</td>
<td>Associate Professor Kathryn von Treur</td>
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<td>The RELIEF trial: restrictive versus liberal fluid therapy in major abdominal surgery</td>
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<td>The role of predictive analysis to leverage healthcare data assets</td>
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<td>The role of skin resident memory T cells in alopecia areata</td>
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<td>The use of a multimedia module to aid the informed consent process in patients undergoing laparoscopy for pelvic pain – pilot study</td>
<td>Dr Peter Mah</td>
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<td>The use of probiotics versus Fybogel in achieving rectal volume consistency for prostate radiotherapy: a retrospective study</td>
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<td>To establish a database recording patient outcomes post botulinum toxin injection for spasticity from chronic neurological conditions</td>
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<td>Transition to parenthood: factors predicting depression in mothers and fathers</td>
<td>Dr Len Kliman</td>
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<td>Use of intrathecal baclofen in Hereditary Spastic Paraplegia</td>
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<td>Validation of a clinical questionnaire for the diagnosis of plantar fasciitis</td>
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<td>Vulvar cancer: prognostic factors and long-term outcomes</td>
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18 de Steiger R Fractured neck of femur: results from the Joint Registry. AOA Continuing Education Meeting, Melbourne 2 May 2013
22 de Steiger R The impact of surgeon volume on the outcome of hip replacement. European Federation of National Associations of Orthopaedics and Traumatology (EFORT) Congress, Istanbul, Turkey, 5–8 June 2013
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24 de Steiger R The outcome of revised resurfacing arthroplasty. European Federation of National Associations of Orthopaedics and Traumatology (EFORT) Congress, Istanbul, Turkey, 5–8 June 2013
28 de Steiger R, Graves S, Cashman K, Liu Y, Davidson, D, Ryan P The outcome of revised resurfacing arthroplasty. 14th European Federation of National Associations of Orthopaedics and Traumatology (EFORT) Istanbul, Turkey, 5–8 June 2013
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37 Davidson, D, de Steiger R, Cashman K, Liu Y, Ryan P Depth of transcutaneous aortic valve implantation does not correlate with aortic regurgitation or need for permanent pacing. Cardiac Society of Australia and New Zealand Annual Scientific Meeting and The International Society for Heart Research Australasian Section Annual Scientific Meeting, Brisbane 16–19 Aug 2012
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54. Feller JA
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Algorithm for surgical management of recurrent patellar instability.
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Return to sport following ACL reconstruction: Are we as good as we think we are?
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Return to sport following ACL reconstruction: Are we as good as we think we are?
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Int J Stroke 2012;7 Suppl 1:8

Feasibility of a double-blind cluster randomized-controlled trial of long-term risk factor management in survivors of stroke
STROKE 2012 – a combined meeting of the Stroke Society of Australasia ASM and the 8th Smart Strokes Australasian Nursing and Allied Health Stroke Conference, Sydney 29–31 Aug 2012
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62. Gould K, Ponsford J, Spitz G
Dysexecutive syndrome and concurrent anxiety disorders following traumatic brain injury
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128. Warrier S, Lynch C, Kalady M, Church J, Heriot AG
The role of preoperative evaluation in young onset colorectal cancer and its impact on surgical strategy
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129. Whitehead TS
Biomechanical comparison of double bundle versus single bundle anterior cruciate ligament reconstruction using three dimensional gait analysis

130. Whitehead TS.
Biomechanical comparison of double bundle versus single bundle anterior cruciate ligament reconstruction using three dimensional gait analysis
AOA Victorian Branch Annual Scientific Meeting, Lorne, Victoria 22–24 Feb 2013

131. Whitehead TS.
Biomechanical comparison of double bundle versus single bundle anterior cruciate ligament reconstruction using three dimensional gait analysis
9th Biennial International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress, Toronto, Canada 12–16 May 2013

132. Muhammad I, Teoh SY, Wickramasinghe N
The application of a sociotechnical analysis for the personally controlled electronic health record
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133. Wickramasinghe N, Troshani I, Goldberg S
Adoption of pervasive e-health solutions: the need for an appropriate regulatory framework.
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An investigation into the role for a pervasive technology solution to support gestational diabetes self-care.
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135. Wickramasinghe N, LeRouge CG, Flarity J, Campbell S
Patient-centred design: a field quasi-experiment for CADA
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136. Wickramasinghe N
Contactless biomedical sensing for vehicular applications
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137. Zwicker M, Seitz J, Wickramasinghe N
Identifying critical issues for developing successful e-health solutions

138. Mohammed I, Zwicker M, Wickramasinghe N
Using ANT to understand key issues for successful e-Health Solutions
46 Hawaii International Conference System Science Maui 7–11 Jan 2013

139. Wickramasinghe N
mHealth
University of Hohenheim, Germany 24 Jan 2013

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e-Health
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141. Troshani I, Wickramasinghe N
The wow factor of e-health
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142. Tatnall A, Davey B, Wickramasinghe N, Dakich E
Major eGovernment projects in health, education and transport in Victoria
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143. Troshani I, Davey B, Dakich E, Wickramasinghe N
The Ultranet: an eGovernment project management failure?
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Understanding cross-cultural ERP implementation impact: a FVM perspective
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Understanding cross-cultural e-Health solutions: how to integrate different e-health solutions?
Bled eConference, Bled Slovenia, 9–13 June 2013


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