Health and Medical Research

Investing in research is central to the way we deliver exceptional patient care, now and in the future.

Report 2017/2019
Welcome to our 2017-19 report for health and medical research.

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A culture of research and inquiry is an important element of our strategy to provide excellent clinical care at St John of God Murdoch Hospital. Our research program is diverse and has a strong patient-centred focus. It explores both current and future challenges in hospital-based healthcare including the impact of new technologies, models of patient care, and evaluation of clinical outcomes.

The growth in research activity at Murdoch is reflected in the significant increase in research approvals over the past year. Motivated principle investigators and experienced teams of research co-ordinators, nurses and administrators have worked hard to produce the research output presented in this report.

Collaboration is vital to the scope and quality of the research conducted in our hospital. These collaborations support our participation in numerous international, multi-centre studies along with those conducted in partnership with local and national universities. I acknowledge the contribution of the extended research team of health service providers and clinical caregivers whose support is critical to our research success.

I commend all those involved in research at Murdoch over the past two years. The commitment to clinical inquiry will help realise our vision of clinical service delivery that is evidence-informed and responsive to change.

Ben Edwards
CEO
St John of God Murdoch Hospital
Our Hospital

St John of God Murdoch Hospital is one of Western Australia’s leading private health campuses, providing compassionate and high quality care for our community.

The Hospital was opened in 1994 and provides comprehensive care for the southern region, including an emergency department, maternity, paediatrics, intensive care, medical and surgical services and palliative care.

At Murdoch, our caregivers are focussed on providing excellent clinical care which is person-centred.

St John of God Murdoch Hospital is a division of St John of God Health Care, a leading Catholic not-for-profit healthcare group, serving communities with hospitals, home nursing and social outreach services throughout Australia, New Zealand, and the wider Asia-Pacific region. We strive to serve the common good by providing holistic, ethical and person-centred care and support.

We aim to go beyond quality care to provide an experience for people that honours their dignity, is compassionate and affirming, and leaves them with a reason to hope.
Our Research

RESEARCH SNAPSHOT 2017-19

- 5 Research Units
- 15+ Employed Researchers
- 44 New Projects Approved
- 49 Publications
- 23 Oncology Clinical Trials Underway
- 98 Conference Presentations
The Murdoch Strategic Research Committee supports and encourages research within the hospital, and in collaboration with our partner organisations. Committee membership was extended this year to include representation from all research teams, with the aim of facilitating growth in our areas of research strength, enhancing collaboration between research teams and promoting the research culture at SJOG Murdoch Hospital.

Murdoch has built a reputation for its strong research governance processes, and successful conduct of clinical trials. There are 23 oncology clinical trials currently in progress, supported by a growing research team. Recent FDA approvals of new treatment regimes tested in oncology trials at Murdoch will enable the availability of these medications for patients requiring cancer treatment.

The patient-centred focus of the Centre for Nursing and Midwifery Research was evident in a highly successful research symposium at Murdoch in 2018. Awarded for research innovation by Catholic Healthcare Australia, the research conducted by this team addresses key issues in patient care, in the hospital and community.

Established to promote continual improvement in patient outcomes through research, the Murdoch Centre for Orthopaedic Research supports a growing portfolio of studies. The success of this initiative is evident in the related publications, and presentation of results at national and international conferences.

The SJOG Murdoch Hospital Intensive Care Unit is one of the few research-active private Intensive Care Units in Australia. The team is participating in national and international clinical trials assessing best management of critically ill patients. The results, published in some of the most prestigious international medical journals, will have immediate impact on patient care.

Our Emergency Medicine research combines evaluation of contemporary models of care, and the role of alternative therapies for management of acute pain. The recent appointment of a full-time Emergency Medicine research associate will support further growth in this successful research team.

The Murdoch Strategic Research Committee recognises the support of caregivers and participants as fundamental to the current and future success of research at Murdoch. Continued research growth will support the delivery of evidence based, high quality care and improved patient outcomes at Murdoch, and more broadly across the organisation and beyond.

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Associate Professor Alison Parr
Murdoch Strategic Research Committee Chair
Our five research units have delivered an outstanding portfolio of diverse research work and achievement in 2017-19.

A brief selection of highlights for this year are showcased below.

**Research accolades**
The ADRENAL Study, looking at ICU patients who are administered hydrocortisone, won the STiNG Award for Excellence in Trial Statistics.

**Intensive Care Unit Research Group**

**Project milestones**
The Emergency Department Ear Acupuncture (EDEA) Trial is underway to look at the use of acupuncture to relieve pain in the Emergency Department. This is the first clinical trial for this unit.

**Emergency Medicine Research Group**

**Patient recruitment**
A total of 434 patients who have had total hip or knee replacements were recruited for a world-first study into falls after major joint replacement surgery.

**Centre for Nursing and Midwifery Research**
Nine clinical trials currently in recruitment phase, and 15 trials closed to recruitment with patients receiving treatment or in follow-up.

**Oncology Clinical Trials**

**Noteworthy achievements**
The Centre is conducting a range of investigator-led and industry-funded studies, and rapidly establishing a strong track record in publications and conference presentations.

**Murdoch Centre for Orthopaedic Research**
Research Operations Manager Report

Enacting our research strategic initiatives has been the focus of research operations this year. Growth in our research teams has boosted our capacity to support clinical research and reputation for excellence in research conduct. Building on our established relationships with commercial sponsors has attracted an increasing number of clinical trials to Murdoch.

We have a strong network of research support from caregivers and service providers within the hospital. Collaborations between our research centres and university partners has expanded opportunities for investigator-led and collaborative research group research. Industry funding, and the generosity of donors to the St John of God foundation, has supported the procurement of research infrastructure and resources.

Our research governance framework was favourably reviewed this year by the NSQHS accreditation panel. The quality and efficiency of research governance processes at Murdoch ensures patient safety and quality are central to all research conducted in the hospital.

Dr Stephen Edmondston
Research Operations Manager
Over the past twelve months, St John of God Foundation, through the generous support of the community, has continued to help advance vital health and medical research, state-of-the-art facilities, equipment and services, and patient-centred care at St John of God Murdoch Hospital.

Throughout the financial year 2018/19, the St John of God Foundation raised more than $1.4 million in donations nationally to support better health outcomes for our patients through St John of God Health Care.

Donations totalling over $180,000 were directed specifically to St John of God Murdoch Hospital to support areas of significant need, including over $100,000 to cancer research and treatment and almost $60,000 to the Murdoch Community Hospice and Footprints Day Centre.

Ongoing funding for health and medical research is vital in generating new knowledge to improve patient outcomes and advances in healthcare, and the Foundation is grateful to our community of donors who support research at St John of God Murdoch Hospital.

Murdoch Community Hospice provides palliative care patients with holistic treatment, while Footprints Day Centre, located at the hospice, provides practical and emotional support to individuals and their families during their time of greatest need.

I would like to formally acknowledge Mr Siegfried and Mrs Gudrun Westerfeld, who generously contributed $100,000 towards excellence in cancer treatment, and Mrs Dolores and Mr Kevin Beasley who contributed an additional $10,000 towards the Annette Guthrie Patient Care Assistant Bursary.

The Foundation also recently installed donation ‘tap and go’ machines in the two cafés and florist at the Hospital, and recognises every donation from visiting patients, families and the local community.

Ben Edwards, St John of God Murdoch Hospital CEO and Foundation Board member is grateful for the ongoing support of Foundation donors. “Generous donations directed to St John of God Murdoch Hospital are vital in supporting our medical research and personalised patient care, and help us provide the best possible treatment options for our patients,” Ben said.

As the philanthropic arm of St John of God Health Care, the Foundation is grateful for the ongoing support of the community in sharing St John of God Health Care’s vision to give its patients and families a reason to hope, and a greater sense of their own dignity.

On behalf of the Foundation and St John of God Health Care, I would like to thank all of the generous donors of the Foundation who enable life-changing impacts for our patients and their families.
Our Team

Our team are committed to continually extending our research capabilities, in line with our vision of clinical service delivery that is evidence-informed and responsive to change.

Murdoch Strategic Research Committee
- Chair, Associate Professor Alison Parr, Director Medical Services
- Sarah-Jayne Powell, Director of Nursing and Patient Experience
- Colin Keogh, Director of Mission Integration
- Professor Leanne Monterosso, Chair of Nursing Research (Clinical Nursing)
- Dr Stephen Edmondston, Research Operations Manager
- Associate Professor Adrian Regli, Intensivist Researcher
- Dr Katherine Mackie, ED Researcher
- Rebecca Weselman, Oncology Researcher
- Rebekah Gibbons, Orthopaedic Researcher
- Julie Dally, Consumer Representative
- Committee Secretary, Alexis Cranfield, Clinical Nurse Research

Murdoch Research Governance Review Panel
- Chair, Sarah-Jayne Powell, Director of Nursing and Patient Experience
- Dr Gail Ross-Adjie, Nurse Researcher
- Dr Katherine Mackie, Research Associate
- Melissa Moran, Acting Manager Quality and Risk
- Panel Secretary, Alexis Cranfield, Clinical Nurse Research
Our Ethics

This research covers a number of different clinical specialities, and ranges from small single-site quality improvement projects through to large, international multicentre randomised control trials.

The committees work closely with researchers and the St John of God Health Care (SJGH) Divisions to promote ethical and high quality research that can be translated into evidence-based, best practice and care for our patients.

The SJGH Research Handbook is the Standard Operational Procedures (SOPs) and the key reference for conducting research at SJGH. It provides guidelines for how to make a new study submission, contains protocols and references to support researchers and has links to all the submission forms.

Over the past two years, there has been continued streamlining of the research review and monitoring processes, including ongoing updates to internal protocols and submission forms. This has been in line with revisions made to NHMRC guidelines and other regulatory requirements.

The committees are managed by Executive Officer Gorette De Jesus, and Research Ethics Officer Karen Roberts, with Martha Jaworski being in the position of Research Ethics Officer since January 2019 providing maternity leave cover for Ms Roberts.

During the past two years, we have welcomed new committee members: Dr Samantha Bowyer, Myles Murphy, Dr Tasnuva Kabir, Myles Murphy, Fr Conor Steadman, Sr Philomena Burrell, Dr Ru-Wen Teh, Dr Gail Ross-Adjie and Dr Stuart Prosser.

We are grateful for the time and commitment to research ethics review provided by the following committee members who retired from the SRC and SJGH HREC over 2018 and 2019: Professor Michael Byrne, Jeffrey Williams, Mary Rigby, Tracey Piani, Sr Leonie O’Brien and Colin Keogh.

We look forward to continuing to support and promote ethical and high quality research at St John of God Murdoch Hospital.
Our Ethics

Current SJGHC Human Research Ethics Committee Membership (2019)

- Clinical Professor Dr Simon Dimmitt (Chair) BMedSc (Hons) MBBS FRACP FCSANZ
- Fr Joe Parkinson STL PhD
- Dr Janie Brown BNurs MEd PhD
- Dr Ben Carnley MBBS FRACP FRPath
- Mr Eric Heenan BLaws (Hons) The Honorary Q.C (Retired Judge Supreme Court WA)
- Dr Tasnuva Kabir PhD MSc MBBS
- Mr Hamish Milne BA (Hons) GradCertEthics MPhil MBA GAICD FAIM
- Mr Patrick O’Connor MPsysch (clinical) MBA
- Professor Sally Sandover BSc MPH
- Fr Conor Steadman STL BDSc(Hons)
- Sr Philomena Burrell BEd MEd Leadership
- Dr Gail Ross Adjie PhD MClinNurs GCert(BusAdm) BNurs RN MACN

Current Scientific Review Sub-Committee Membership (2019)

- Professor Sally Sandover (Chair, SRC) BSc MPH
- Dr Samantha Bowyer MBCh MRCP FRACP MPH
- Professor Kevin Croft PhD FRSC
- Ms Gemma McGrath BNurs BLaws (Hons) Master of Laws
- Professor Leanne Monterosso PhD BNurs (Hons) GCertTerTeach RN RM NNT FACN
- Mr Myles Murphy BPhysio GCSports Physio MClinPhysio
- Dr Kylie Russell Master Health Science (Education) BNurs PhD Grad Cert Human Resource Management (in progress)
- Mr John Taylor FRCP FRCS FRCS(Ed) FRACS FRCOG FRANZCOG
- Dr Paige Tucker BSc (Biomed Sc) BMBS (Hons) PhD (in progress) AHPRA
- Dr Ru-Wen Teh MBBS FRCA
- Dr Stuart Prosser MBBS DCH DRANZCOG (Advanced) FRACGP FACRRM MBA
Centre for Nursing and Midwifery Research

Our Centre is the only dedicated nursing and midwifery research hub across the St John of God Health Care divisions. Whilst the scope of the Centre’s research activity is intentionally broad reflecting as many areas of care as possible, our specialty research areas include cancer, palliative care, orthopaedics and maternity.

HIGHLIGHTS

• Dr Gail Ross-Adjie was joint winner of Catholic Healthcare Australia’s Research ‘Shark Tank’ for the world-first study into falls after major joint replacement surgery.
• A total of 434 patients who had a total hip or knee replacement were recruited and followed up for 12 months. Of these 47 patients were also interviewed to determine their perceptions of the cause and consequences of falls, and awareness and knowledge about falls and falls prevention.

FOCUS AREAS

• The Centre’s research team strives to undertake research that has broad applicability to patients at other St John of God Health Care divisions, the public sector, nationally and internationally.
• The Centre has built a strong track record of research that is not only responsive to the needs of our patients, but aligned with organisational and national research priorities and the Australian Council on Health Care Standards.

KEY STAFF

Professor Leanne Monterosso – Chair in Nursing Research
Dr Gail Ross-Adjie – Nurse Researcher
Alexis Cranfield – Clinical Nurse Research

CONTACT

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### PROJECTS

<table>
<thead>
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<th>Project Description</th>
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<tbody>
<tr>
<td><strong>Improving whole person care: A mixed methods study</strong></td>
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<tr>
<td>The study is being undertaken across five WA and Victorian divisions to explore patient and SJGHC caregivers understanding and perceptions of the importance of spiritual and emotional care, and raise caregiver awareness and competency in the multidisciplinary delivery of person centred care.</td>
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<tr>
<td><strong>A cross-sectional study to establish the supportive care and health literacy needs of cancer patients undergoing anticancer treatment in a private cancer centre</strong></td>
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<tr>
<td>This study aimed to obtain a detailed understanding of the unmet needs of patients at different stages in their cancer treatment within a private hospital cancer centre. Results are being used as the basis for development of supportive care and informational resources to help improve the health and wellbeing of our patients - before, during and after cancer treatment.</td>
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<tr>
<td><strong>Bowel management post major joint arthroplasty: A randomised controlled trial to test two new bowel regimens</strong></td>
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<td>This study will determine which of two dosage regimens of polyethylene glycol with electrolytes (Movicol™) commenced pre-operatively is most effective in facilitating a return to normal bowel function after major joint arthroplasty when compared with a control group. This study is an extension of the very successful Murdoch Bowel Protocol study, the protocol for which is being used nationally and internationally.</td>
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<tr>
<td><strong>Fly-in fly-out families maternity care needs</strong></td>
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<td>The study aimed to develop a detailed profile of the healthcare needs of Fly-in-Fly-out (FIFO) families particularly in the antenatal and the early post-partum period to assist SJGHC to make informed decisions about the healthcare services the group provides to this demographic.</td>
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<tr>
<td><strong>Peristomal skin complications in the first 12 weeks post ostomy formation surgery: A preliminary observational study</strong></td>
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<tr>
<td>This study will determine the incidence of peristomal skin complications in the 12 weeks after ostomy formation surgery, and to describe the factors which contribute to peristomal skin irritation and breakdown. Results will be used to improve the care and education provided to patients with ostomies who face significant alterations to quality of life.</td>
</tr>
<tr>
<td><strong>Development and evaluation of an educational video for patients undergoing ileostomy formation surgery</strong></td>
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<tr>
<td>This project will develop an educational video to provide crucial patient education after formation of an ileostomy and evaluate its effect on knowledge retention at one week, one month and three months after discharge.</td>
</tr>
<tr>
<td>Research Project</td>
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<tr>
<td>Cultural security of Aboriginal mothers birthing in an urban facility</td>
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<tr>
<td>(PIFI) Parent Infant Feeding Initiative: a study to enhance breastfeeding duration</td>
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<tr>
<td>Incidence, risk factors and healthcare cost of falls post discharge after elective total hip and total knee replacement</td>
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<tr>
<td>The Women’s Wellness after Cancer Program: a national multicentre randomised wedge-step clinical trial of an e-health enabled lifestyle modification intervention to improve the health and wellness of women after cancer treatment</td>
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<tr>
<td>Developing a wellbeing education program for cancer nurses</td>
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</table>
HIGHER DEGREE CAREGIVER STUDIES

Exploration of the role of the enrolled nurse (EN) within a team nursing model from the perspective of ENs and registered nurses (RNs)
Anne Gardner
PhD Nursing (C) student
University of Notre Dame Australia

Patient controlled analgesia in emergency departments (EDs): A mixed method study
Notasya Raja Azlan
PhD Nursing (C) student
University of Notre Dame Australia

Patient’s perception of health status and association with activities of daily living in the 12 months following total knee replacement (TKR) surgery
Irene von Staden
Master of Nursing student
University of Notre Dame Australia

Incidence, characteristics and circumstances of injurious falls in the 12 months post discharge following total knee replacement (TKR) surgery: A convergent mixed methods study
Alexis Cranfield
Master of Nursing (C) student
University of Notre Dame Australia

PUBLICATIONS


REPORTS


Emergency Medicine Research Group

Our research team is committed to improving patient outcomes and practices within our Emergency Department. Research collaborations are fundamental to our work and we have strong links with St John Ambulance, the Pre-Hospital Care Research Unit at Curtin University and The University of Notre Dame Australia.

FOCUS AREAS

- Use of acupuncture for pain relief in the ED
- Quality of cardiopulmonary resuscitation (CPR) delivered by emergency doctors and nurses
- Why paramedics bring patients to a private ED
- Patient flow within the ED

HIGHLIGHTS

- The first clinical trial for this unit is currently being conducted
- Two of our caregivers, Adjunct Professor Andrew Jan and Natasja Raja Azlan, are currently completing their PhD studies

KEY STAFF

- **Dr Paul Bailey** – Director of Emergency Medicine
- **Professor Ian Rogers** – Professor of Emergency Medicine
- **Professor Steve Dunjey** – Professor of Emergency Medicine
- **Professor Andrew Jan** – Adjunct Professor of Emergency Medicine / PhD Candidate
- **Dr Katherine Mackie** – Emergency Medicine Research Associate
- **Emogene Aldridge** – Academic Support Officer
- **Natasja Raja Azlan** – Registered Nurse / PhD Candidate
- **Hannah Root** – Clinical Nurse
- **April Kruining** – Clinical Nurse / Learning and Development Educator

CONTACT

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# PROJECTS

## CTPA in ED
Emergency physicians remain very concerned about both the overuse and underuse of computed tomography pulmonary angiogram (CTPA), the investigation of choice in the work-up of suspected PE in ED. In conjunction with colleagues across Australia and New Zealand, we performed a study to establish the range of CTPA positive yield which departments and individual clinicians can use as a clinical indicator against which to compare their own performance.

## Why paramedics bring patients to a private ED?
The reasons why patients self-present to a private ED are well established, however, the role paramedics play in this decision for patients presenting via ambulance is unknown. This study investigated paramedic’s motivations for presenting to ED, and their perceptions and expectations of the visit, through paramedics participating in short structured interviews.

## CPR skills in ED
Survival rates post cardiac arrest are impacted by the quality of cardiopulmonary resuscitation (CPR), with increasing evidence that high quality CPR improves survival and favourable neurological outcomes. There is documented evidence that healthcare providers, in ED or elsewhere, are not better than lay persons in adhering to the guidelines when performing CPR. This study aims to ascertain if the deficit is in ED staff knowledge of the guidelines or in their ability to translate their knowledge into practice.

## Acupuncture in the emergency setting
Providing an alternative holistic viewpoint on pain management in the emergency department, Prof Andrew Jan’s PhD is designed to investigate the effect of acupuncture on acute pain management in the emergency setting. We are currently undertaking a pilot trial investigating the use of a brief, ED suitable technique known as battlefield acupuncture. This research will establish the role of acupuncture as a stand-alone or adjunctive technique in emergency medicine.

## Patient flow in the ED
Efficient patient flow through the Emergency Department (ED) is important for quality of care, patient outcomes and patient satisfaction. Improving patient flow can be achieved by reducing the amount of time patients spend in the ED, thereby reducing departmental crowding. This study aims to observe the effects of operational changes on ED wait times, length of stay and patient satisfaction.
PUBLICATIONS


Intensive Care Unit Research Group

Our research group is focused on improving aspects of treatments provided to intensive care patients. It is important that patients are receiving the best possible care when they are at their most vulnerable. This research team is a member of the Australian and New Zealand ICU Clinical Trials Group.

FOCUS AREAS
- Participating in national and international clinical studies assessing best management of critically ill patients.
- Contributing in national and international observational studies including the Australian and New Zealand Adult Intensive Care research database.

HIGHLIGHTS
- Results of three studies conducted in this ICU have been published in the New England Journal of Medicine.
- Participation in six multicentre clinical trials and in seven multicentre observational studies.
- Australian Clinical Trials Alliance 2019 - The ADRENAL Study was a Finalist for Trial of the Year and took out the STiNG Award for Excellence in Trial Statistics.
- The TRANSFUSE Trial was awarded Finalist for the Australian Clinical Trials Alliance (ACTA) Clinical Trial of the Year (all fields of medicine). This award, presented by the Federal Health Minister Greg Hunt, is a tribute to the superb quality of clinical trial research in intensive care in both countries, and to its expanding international recognition.

KEY STAFF
- Associate Professor Adrian Regli – Consultant Intensivist
- Associate Professor Bart de Keulenaer – Consultant Intensivist
- Annamaria Palermo – Research Nurse
- Susan Pellicano – Research Nurse
- Ege Eroglu – Research Assistant
- Smita Dev-Chatterjee – Pharmacist
- Dr Ross O’Grady – Medical Officer

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### PROJECTS

**TRANSFUSE Study: Standard Issue Transfusion versus Fresher Red Blood Cell Use in Intensive Care – a randomised controlled trial**

To determine if the transfusion of the freshest available Red Blood Cells in critically ill patients compared to standard care decreases mortality.

There was no difference in outcome found between patients receiving front of shelf as opposed to back of shelf red blood cell transfusions. This study highlights that our common practice of using back of shelf red blood cell transfusion is safe.

**PROMEDIC Study: Prophylactic Melatonin for the Prevention of Delirium in Intensive Care. A randomised blinded placebo controlled trial of melatonin in Intensive Care patients for the prevention of delirium**

To determine whether melatonin given prophylactically decreases the prevalence of delirium in critically ill patients.

Enrolment is ongoing.

**ICU-ROX Study: Conservative Oxygen therapy versus Standard Care in mechanically ventilated patients**

To determine whether a conservative oxygen strategy, which avoids giving more oxygen than is necessary to maintain normal levels of oxygen in the blood, improves ventilator-free days compared to a standard oxygen strategy.

Enrolment is complete and results are being analysed.

**ROCIT Trial: Restoration of gut microflora in critical illness**

To determine whether administration of probiotic therapy is associated with decreased infection rate and improved outcomes in critically ill patients.

Enrolment is ongoing.

**TARGET Study: The Augmented versus Routine approach to Giving Energy Trial – a randomised controlled trial**

To investigate whether extra energy or calories improve survival and quality of life after critical illness when compared to routine care.

Energy dense enteral feeds was not superior to standard enteral feeds in terms of survival and suggests that the type of amount of enteral feed is not as crucial as previously thought for improving patient outcome of critically ill patients.
## PROJECTS

**PLUS Study:** Plasmalyte vs Normal Saline for fluid resuscitation in critically ill patients

To determine whether critically ill patients with low blood volume who receive fluid resuscitation with Plasma-Lyte 148 compared to Normal Saline will have an improved chance of survival at 90 days.

Enrolment has been suspended due to issues around consenting for incapacitated patients to participate in research.

**CHESTY:** Chest infection prevalence following surgery. International multicentre observational trial

To determine the incidence of post-operative pulmonary complications following major abdominal surgery.

Study is ongoing.

**SIQ:** Multicentre survey of sources of health information used by surrogate decision makers of patients admitted to the ICU

To describe the sources of health information and associated trust, reported by ICU patient’s Person Responsible.

Observation is complete and data are being analysed.

**WEAN SAFE:** Worldwide assessment of separation of patients from ventilator assistance

To describe current procedures for weaning patients from invasive mechanical ventilation.

Observation is complete and data are being analysed.

**WELCOME-ICU:** Online survey / questionnaire

To investigate current ICU visitor visiting practices and understand the barriers, risks and benefits of implementing open visiting policies according to the staff working in this area.

Observation is ongoing.

**DIANA Study:** Determinants of Antimicrobial Use and de-escalation in critical care

Prospective, observational multicentre, international cohort study

To describe antibiotic therapy, de-escalation, mortality, ICU and hospital length of stay, infection relapse and subsequent infection rate in ICU patients.

Observation is complete and data are being analysed.
PROJECTS

**INTUBE STUDY**
International Observational study
To understand the impact and best practices of airway management in critically ill patients. Observation is complete and data are being analysed.

PUBLICATIONS


Murdoch Centre for Orthopaedic Research

This unit is focused on the continual improvement of patient outcomes through evaluation of surgical outcomes and models of care. It has been established as a centre of excellence in orthopaedic research.

FOCUS AREAS
- Radiological and clinical outcomes of joint replacement and knee cartilage repair surgery.
- Computer navigation and clinical outcomes in shoulder replacement surgery.

HIGHLIGHTS
- Significant growth in investigator-led and industry supported research projects
- Presentation of MCOR research findings at national and international orthopaedic conferences

KEY STAFF
Mr Ben Jeffcote – Orthopaedic Surgeon & MCOR Director
Professor Allan Wang – Orthopaedic Surgeon & MCOR Director
Professor Piers Yates – Orthopaedic Surgeon
Mr Mark Hurworth – Orthopaedic Surgeon
Rebekah Gibbons – Orthopaedic Research Officer
Dr Katherine Mackie – Orthopaedic Research Officer

CONTACT
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## PROJECTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Computer navigation of reverse total shoulder arthroplasty: the learning curve</strong></td>
<td>The aim of this project is to explore the application of computer navigation in reverse total shoulder arthroplasty (RSA) and to determine its learning curve, safety and accuracy.</td>
</tr>
<tr>
<td><strong>The knee stress test: a proposed test for assessing patient outcomes in knee arthroplasty using a bicycle power meter</strong></td>
<td>This study examines a new method to test muscle power using a bicycle power meter. The first phase of the study examines the reliability of this new test in healthy control participants. The second phase of the study involves assessing the post-operative recovery of participants undergoing a total knee replacement (TKR). Participants will be followed for one year to assess the recovery of their leg muscle power and function.</td>
</tr>
<tr>
<td><strong>Patient satisfaction following plantar fasciotomy</strong></td>
<td>With the efficacy of surgical treatment for plantar fasciitis not established, it is important to determine its success through long-term patient reported outcome and satisfaction levels following surgery. The aim of this study was to investigate patient satisfaction and quality of life following plantar fasciotomy.</td>
</tr>
<tr>
<td><strong>Clinical and radiological outcomes using the Absolut femoral prosthesis and the Global cup system</strong></td>
<td>This study evaluates post-operative radiology and clinical outcomes in patients who undergo primary total hip replacement using the Absolut femoral stem and Global acetabular cup. Patients will be recruited over a two year period and followed up to 10 years after surgery.</td>
</tr>
<tr>
<td><strong>Multi-Center Clinical Evaluation of the ATTUNE® Revision System in the Revision Total Knee Arthroplasty</strong></td>
<td>Five-year, prospective, multi-center, non-randomized, non-controlled study of the ATTUNE® Revision total knee prostheses, utilizing the fixed bearing (FB) and rotating platform (RP) tibial component with the posterior stabilizing (PS) femoral component in revision total knee arthroplasty (TKA).</td>
</tr>
<tr>
<td><strong>Multi-Center Clinical Evaluation of the ATTUNE® Revision System in Complex Primary Total Knee Arthroplasty</strong></td>
<td>Five-year, prospective, multi-center, non-randomized, non-controlled study of the ATTUNE® Revision total knee prostheses, utilizing the fixed bearing (FB) and rotating platform (RP) tibial component with the posterior stabilizing (PS) femoral component in complex primary total knee arthroplasty (TKA).</td>
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<td>Section</td>
<td>Description</td>
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<tr>
<td>Cartilage repair registry</td>
<td>The purpose of the cartilage repair registry is to improve and maintain the quality of care for individuals receiving cartilage repair surgery. The aim is to capture data on all patients undergoing cartilage repair surgery to objectively determine their functional outcomes using condition specific patient-reported outcome measures.</td>
</tr>
<tr>
<td>A comparison of functional outcomes at baseline and three months post knee arthroscopy: a pilot study</td>
<td>Arthroscopy is an important and commonly performed orthopaedic procedure in Australia and considered the gold standard in the diagnosis of meniscal and ligamentous injury. Large numbers of arthroscopies are performed at St John of God Murdoch Hospital yet no evaluation of patient reported functional outcomes has been undertaken. This study aimed to document patient self-reported functional outcomes at three months post arthroscopy using a validated tool and demonstrate feasibility of undertaking these post-operative evaluations.</td>
</tr>
<tr>
<td>Partial versus total knee replacement: a single surgeon retrospective study</td>
<td>This study aimed to investigate differences between total knee replacement (TKR) and partial knee replacement in today's technological setting.</td>
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PUBLICATIONS


The Murdoch Oncology Clinical Trial Unit was established in 2012, with the aim of providing West Australian oncology patients and their families the best possible care through research-driven practice. Our current portfolio of trials examine outcomes of conventional and innovative cancer treatments.
FOCUS AREAS
- Providing exceptional care to patients by offering innovative cancer treatment which may only be available in a clinical trial setting
- Conducting clinical trials for patients having treatment for a range of cancer types including lung, breast, pancreatic, renal, bladder, oesophageal and stomach cancer
- Continual improvement of clinical trial processes and alignment with contemporary best practice

HIGHLIGHTS
- Nine clinical trials currently recruiting patients and 15 trials that have completed recruitment with patients receiving treatment or in follow-up
- Established reputation for successful recruitment and management of patients in oncology clinical trials
- Three new cancer medication regimes evaluated in clinical trials at Murdoch approved by the US Food and Drug Administration (FDA).

KEY STAFF
Medical Oncologists
Associate Professor Kynan Feeney
Associate Professor Daphne Tsoi
Dr Sanjay Mukhedkar

Senior Clinical Trial Co-ordinators
Dr Chrissie Whiteley
Rebecca Weselman

Clinical Trial Co-ordinators
Annemarie Naylor
Justine Leon

Clinical Trials Nurse
Sabina Jelinek

Medical Administrator
Tina Kern

Clinical Trials Pharmacists
Richard Grainger
Hannah Lindley

CONTACT
Email: oncologytrials.murdoch@sjog.org.au
Phone: 9438 9012
# CLINICAL TRIALS

<table>
<thead>
<tr>
<th>Study</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHECKMATE 060</td>
<td>A Randomized, Open-label, Phase II Clinical Trial of Relatlimab (anti-LAG-3) plus Nivolumab in Combination with Chemotherapy Versus Nivolumab in Combination with Chemotherapy as First-Line Treatment in Patients with Gastric or Gastroesophageal Junction Adenocarcinoma (Open to Recruitment)</td>
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<tr>
<td>Associate Professor Kynan Feeney</td>
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<tr>
<td>CHECKMATE 274</td>
<td>A Phase 3 Randomized, Double-blind, Multi-center Study of Adjuvant Nivolumab versus Placebo in Subjects with High Risk Invasive Urothelial Carcinoma (Open to Recruitment)</td>
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<tr>
<td>Associate Professor Kynan Feeney</td>
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<tr>
<td>CHECKMATE 577</td>
<td>Randomized, Multicenter, Double Blind, Phase III Study of Adjuvant Nivolumab or Placebo in Subjects with Resected Esophageal, or Gastroesophageal Junction Cancer (Open to Recruitment)</td>
</tr>
<tr>
<td>Associate Professor Kynan Feeney</td>
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<tr>
<td>CHECKMATE 914</td>
<td>A Phase 3 Randomized Study Comparing Nivolumab and Ipilimumab Combination Vs Placebo in Participants with Localized Renal Cell Carcinoma Who Underwent Radical or Partial Nephrectomy and Who are at High Risk of Relapse (Open to Recruitment)</td>
</tr>
<tr>
<td>Associate Professor Kynan Feeney</td>
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<tr>
<td>SEQUOIA</td>
<td>A Randomized Phase 3 Study of AM0010 in Combination with FOLFOX Compared with FOLFOX Alone as Second-line Therapy in Patients with Metastatic Pancreatic Cancer that has Progressed During or Following a First-Line Gemcitabine Containing Regimen (Open to Recruitment)</td>
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<tr>
<td>Associate Professor Kynan Feeney</td>
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<tr>
<td>CHECKMATE 648</td>
<td>A Randomized Phase 3 Study of Nivolumab plus Ipilimumab or Nivolumab Combined with Fluorouracil plus Cisplatin versus Fluorouracil plus Cisplatin in Subjects with Unresectable Advanced, Recurrent or Metastatic Previously Untreated Esophageal Squamous Cell Carcinoma (Open to Recruitment)</td>
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<tr>
<td>Associate Professor Kynan Feeney</td>
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</tr>
<tr>
<td>GLORIA</td>
<td>A Phase III, Randomized, Double-blind, Placebo Controlled Study of Adagloxad Simolenin (OBI-822)/OBI-821 Treatment for High Risk Early Stage Triple Negative Breast Cancer Patients, defined as Residual Invasive Disease following Neoadjuvant Chemotherapy OR ≥ 4 Positive Axillary Nodes (Open to Recruitment)</td>
</tr>
<tr>
<td>Associate Professor Daphne Tso</td>
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<tr>
<td>CA07-078</td>
<td>A Phase 3, Randomized, Study of Neoadjuvant Chemotherapy alone versus Neoadjuvant chemotherapy plus Nivolumab or Nivolumab and BMS-986205, Followed by Continued Post-Surgery Therapy with Nivolumab or Nivolumab and BMS-986205 in Participants with Muscle-Invasive Bladder Cancer (Opening soon)</td>
</tr>
<tr>
<td>Dr Sanjay Mudhedkar</td>
<td></td>
</tr>
<tr>
<td>LEAP 007</td>
<td>A Phase 3, randomized, double-blind trial of pembrolizumab (MK-3475) with or without lenvatinib (E7080/MK-7902) in participants with treatment-naïve, metastatic non-small cell lung cancer (NSCLC) whose tumors have a tumor proportion score (TPS) greater than or equal to 1% (LEAP-007) (Open to Recruitment)</td>
</tr>
<tr>
<td>Associate Professor Kynan Feeney</td>
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</tbody>
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### CLINICAL TRIALS

<table>
<thead>
<tr>
<th>Study Name</th>
<th>Principal Investigator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>JAVELIN RENAL 1003</strong></td>
<td>Associate Professor Kynan Feeney</td>
<td>A Phase 3, Multinational, Randomized, Open-Label Parallel-Arm study of Avelumab (MSB001078C) in Combination with Axitinib (Inlyta) versus Sunitinib (Sutent) Monotherapy in the First-Line Treatment of Patients with Advanced Renal Cell Carcinoma <em>(Recruitment Closed)</em></td>
</tr>
<tr>
<td><strong>KAITLIN</strong></td>
<td>Associate Professor Kynan Feeney</td>
<td>A Randomized, Multicenter, Open-Label, Phase III Trial Comparing Trastuzumab Plus Pertuzumab Plus a Taxane Following Anthracycline Versus Trastuzumab Emtansine Plus Pertuzumab Following Anthracyclines as Adjuvant Therapy in Patients with Operable HER2-Positive Primary Breast Cancer <em>(Recruitment Closed)</em></td>
</tr>
<tr>
<td><strong>KEYNOTE 604</strong></td>
<td>Associate Professor Kynan Feeney</td>
<td>A Phase 3 Randomized, Double-Blind, Placebo-controlled Trial of Pembrolizumab (MK3475/SCH900475) in Combination with Etoposide/Platinum (Cisplatin or Carboplatin) for the First-line Treatment of Subjects with Extensive Stage Small Cell Lung Cancer <em>(Recruitment Closed)</em></td>
</tr>
<tr>
<td><strong>KEYNOTE 654</strong></td>
<td>Associate Professor Kynan Feeney</td>
<td>A Phase 3, Randomized, Double-Blind Study of Pembrolizumab (MK-3475) plus Epacadostat (INCB024360) Versus Pembrolizumab plus Placebo as First-Line Treatment in Patients with Metastatic Non-Small Cell Lung Cancer Expression High Levels of PD-L1 <em>(Recruitment Closed)</em></td>
</tr>
<tr>
<td><strong>MONALEESA</strong></td>
<td>Associate Professor Daphne Tsoi</td>
<td>A Phase III, randomized, double-blind, placebo-controlled study of LEE011 or placebo in combination with tamoxifen and goserelin or a non-steroidal aromatase inhibitor (NSAI) and goserelin for the treatment of premenopausal women with hormone receptor positive, HER2-negative, advanced breast cancer <em>(Recruitment Closed)</em></td>
</tr>
<tr>
<td><strong>MONARCH 3</strong></td>
<td>Associate Professor Kynan Feeney</td>
<td>A Randomized, Double-Blind, Placebo-Controlled, Phase 3 Study of Nonsteroidal Aromatase Inhibitors (Anastrazole or Letrozole) plus LY2835219, a CDK4/6 Inhibitor, or Placebo in Postmenopausal Women with Hormone Receptor-Positive, HER2-Negative Locoregionally Recurrent or Metastatic Breast Cancer with No Prior Systemic Therapy in this Disease Setting <em>(Recruitment Closed)</em></td>
</tr>
<tr>
<td><strong>CHECKMATE 649</strong></td>
<td>Associate Professor Kynan Feeney</td>
<td>A Randomized, Multicenter, Open-Label, Phase 3 Study of Nivolumab Plus Ipilimumab or Nivolumab in Combination with Oxaliplatin plus Fluoropyrimidine versus Oxaliplatin plus Fluoropyrimidine in Subjects with Previously Untreated Advanced or Metastatic Gastric or Gastroesophageal Junction Cancer <em>(Recruitment Closed)</em></td>
</tr>
<tr>
<td><strong>CHECKMATE 227</strong></td>
<td>Associate Professor Kynan Feeney</td>
<td>An Open-Label, Randomized Phase 3 Trial of Nivolumab, or Nivolumab plus Ipilimumab, or Nivolumab plus platinum doublet chemotherapy versus platinum doublet chemotherapy in Subjects with Chemotherapy-Noéve Stage IV or Recurrent Non-Small Cell Lung Cancer (NSCLC) <em>(Recruitment Closed)</em></td>
</tr>
<tr>
<td><strong>CHECKMATE 331</strong></td>
<td>Associate Professor Kynan Feeney</td>
<td>An Open-label, Randomized, Phase 3 Study of Nivolumab or Chemotherapy in Subjects with Relapsed Small-Cell Lung Cancer after Platinum-based First Line Chemotherapy <em>(Recruitment Closed)</em></td>
</tr>
</tbody>
</table>
CLINICAL TRIALS

CHECKMATE 401
Associate Professor Kynan Feeney
Clinical Trial of Nivolumab (BMS-936558) Combined with Ipilimumab Followed by Nivolumab Monotherapy as First-Line Therapy of Subjects with Histologically Confirmed Stage III (Unresectable) or Stage IV Melanoma (Recruitment Closed)

COLET
Associate Professor Kynan Feeney
A Multistage, Phase II Study Evaluating the Safety and Efficacy of Cobimetinib Plus Paclitaxel, Cobimetinib Plus Atezolizumab Plus Paclitaxel, or Cobimetinib Plus Atezolizumab Plus Paclitaxel as First-Line Treatment for Patients with Metastatic Triple-Negative Breast Cancer (Recruitment Closed)

IMMOTION
Associate Professor Kynan Feeney
A Phase III, Open-Label, Randomized Study of Atezolizumab (Anti-PD-L1 Antibody) in Combination with Bevacizumab Versus Sunitinib in Patients with Untreated Advanced Renal Cell Carcinoma (Recruitment Closed)

CHECKMATE 9LA
Associate Professor Kynan Feeney
A Phase 3, Randomized Study of Nivolumab plus Ipilimumab in Combination with Chemotherapy vs Chemotherapy alone as First Line Therapy in Stage IV Non-Small Cell Lung Cancer (NSCLC) (Recruitment Closed)

JAVELIN BLADDER 1001
Associate Professor Kynan Feeney
A Phase 3, Multicenter, Multinational, Randomized, Open-Label, Parallel-Arm Study of Avelumab* (MSB0010718c) Plus Best Supportive Care Versus Best Supportive Care Along as a Maintenance Treatment in Patients with Locally Advanced or Metastatic Urothelial Cancer Whose Disease Did Not Progress After Completion of First-Line Platinum Containing Chemotherapy (Recruitment Closed)

RAPPER Study
Associate Professor Daphne Tsoi
Review of Australian Prescribing Practices of Eribulin (Recruitment Closed)

PUBLICATIONS


2017-19 CONFERENCE PRESENTATIONS

Centre for Nursing and Midwifery Research


Scientific papers presented


Emergency Medicine Research Group


Intensive Care Unit Research Group

ICU-ROX Study Results will be presented at World Congress of Intensive Care Melbourne. October 13-19 2019.

SIQ Abstract will be presented World Congress of Intensive Care Melbourne. October 13-19 2019.


When to consider single or two-stage revision? Yates P. Invited presentation, ADA Annual Scientific Meeting. Perth, Western Australia. October 2018.


Oncology Clinical Trials


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About St John of God Health Care

St John of God Murdoch Hospital is a division of St John of God Health Care, a leading Catholic not-for-profit health care group, serving communities with hospitals, home nursing and social outreach services throughout Australia, New Zealand, and the wider Asia-Pacific region.

We strive to serve the common good by providing holistic, ethical and person-centred care and support. We aim to go beyond quality care to provide an experience for people that honours their dignity, is compassionate and affirming, and leaves them with a reason to hope.