

# Nursing Research and Practice Development Centre

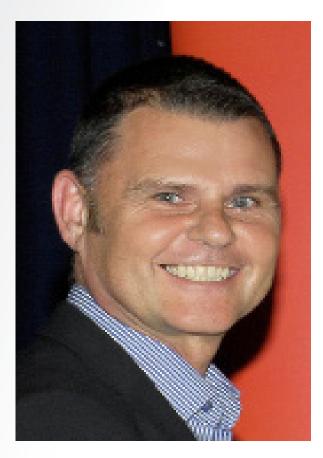
The Prince Charles Hospital Australian Catholic University

**RESEARCH REPORT 2014** 

# Contents

- 03 Welcome
- 04 Messages
- 05 About us
- 06 Personnel
- **07** Steering Committee
- **07** TPCH and ACU Partnership Representatives
- **08** Visiting Researchers
- **10** Associate Researchers
- **11** Research Collaborators
- **12** Post Graduate Research Students
- **13** Completed Research Projects
- **16** Current Research Projects
- **18** New Research Projects
- **19** Publications
- 21 Conference Presentations
- 22 Research Grants
- 22 Hospital Ethics Approvals
- 23 Esteem Indicators

# Welcome



#### **Professor Paul Fulbrook**

On behalf of The Prince Charles Hospital (TPCH) and Australian Catholic University (ACU) Nursing Research and Practice Development Centre (NRPDC), we welcome you to our 2014 annual research report.

This report provides information about the NRPDC research activities during 2014. The report includes information about our many and varied research projects and research outputs, and acknowledges our affiliated clinicians and research students. The Centre is making significant progress, and many of our research projects have now been realised in terms of publication in peerreviewed journals and conference outputs. We look forward to continued growth over the coming years.

The NRPDC employs two part-time research fellows and two part-time research assistants. All positions are jointly funded between TPCH and ACU. In 2014, the NRPDC facilitated six visiting researchers from ACU, who have been involved with TPCH staff on a variety of projects. Their collaboration provides support to TPCH staff with potential and ongoing research projects, and strengthens the research training environment within both organisations. Other users of the NRPDC include ACU higher degree research students, of which the large majority is nursing staff employed within the hospital. These students are supported via the NRPDC and have on-site access to their supervisors, office facilities, and research equipment.

In 2014, in recognition of her important research contribution to the NRPDC, the honorary academic title of Clinical Associate Professor was conferred by ACU to Dr Melanie Jessup, who is one of our Research Fellows.

The NRPDC has continued to actively submit a number of research grants. Whilst competition for research grants is tough, we have been successful in securing a good amount of funds, which have been instrumental in ensuring that nurses are provided adequate time to undertake rigorous research projects.

Publication output from the NRPDC has been excellent, with many colleagues contributing to peer-reviewed publications in high quality journals. Furthermore, research undertaken under the auspices of the NRPDC has been presented internationally, nationally, as well as locally.

The NRPDC nursing research priorities are established annually and are embedded within TPCH Nursing Strategic Plan. In 2014, emergency care was added to the two existing research priority areas of pressure injury and falls injury prevention. As well, cardiothoracic care continues to be a main focus of our research efforts. Activity has been focused within these key areas, and has been very productive.

The continuing hard work of the NRPDC staff, and the collaborations formed with clinician-researchers, have contributed significantly to our ability to conduct clinically relevant research. Although most of our research has been nurse-led, we have developed productive collaborative research partnerships with several other professional disciplines and organisations.

#### Acknowledgement

Our achievements, which are detailed in this report, would not have been possible without the ongoing support received from TPCH and ACU, and generous support from TPCH Foundation, which has provided research grants for a number of important projects, and Kedron and Wavell Services Club which has donated funds to support nursing research at TPCH.



# Messages



#### Clinical Associate Professor Cherie Franks

Director of Nursing Nursing Services The Prince Charles Hospital



#### Professor Michelle Campbell

#### **Executive Dean**

**Faculty of Health Sciences** 

Australian Catholic University

I am delighted to present this 2014 annual report for the Nursing Research and Practice Development Centre, The Prince Charles Hospital (TPCH), which was established in 2010 in collaboration between TPCH and ACU.

The initial years were focused on defining our research strategic priorities and developing the resources and infrastructure to support their achievement. This year we celebrate our 4th anniversary and have built some strong relationships with TPCH Foundation and also Kedron and Wavell Services Club, which we will continue to develop over future years.

The Centre offers our nurses the opportunity to increase their level of knowledge by participating in its mentoring and scholarship programs, enrolling in master's and doctoral research programs and a range of research activities to advance their clinical practice and improve patient outcomes.

To ensure that nursing services are being provided in an efficient and effective manner it is very important that we integrate research into clinical practice. To achieve this we have supported a variety of quality research projects via the Centre, which are presented in this report. Our nurses' research has been presented formally via published articles and conference presentations nationally and internationally.

I am proud of our Centre's achievements and look forward to many productive years ahead.

I am very pleased to present this 2014 annual research report.. I commend the productive joint collaboration between the Nursing Research and Practice Development Centre at the Prince Charles Hospital (TPCH) and Australian Catholic University's (ACU) School of Nursing, Midwifery and Paramedicine within the Faculty of Health Sciences.

Our partnership ensures ACU's continued commitment to helping vulnerable people by supporting vital research. Indeed, our research focuses on progressing the quality of healthcare around key societal needs, meeting the strategic goals of the Faculty and the University.

The Faculty of Health Sciences at ACU provides an exciting and dynamic environment, offering a diverse range of programs in the health sciences. Our vision is to provide caring and prepared graduates who promote health and prevent illness for Australia's health and sports industries, and provide quality healthcare for vulnerable communities such as the Indigenous, elderly and disabled.

I am delighted in the significant contribution of this alliance, and look forward to its ongoing partnership.

# **About Us**

#### Who we are

The NRPDC was founded in 2010, to foster change through research and encourage the implementation of evidence-based practice regarding patient care. Its overall aim is to contribute to improved clinical outcomes.

The NRPDC houses a nurse-led research team whose aim is to inspire, support, and undertake quality research within the hospital. Our current research priority areas, which are established annually in the NRPDC Performance Plan and are aligned with nursing priorities that are identified within TPCH Nursing Strategic Plan, are:

- · falls injury prevention
- pressure injury prevention
- emergency care
- · cardiothoracic care

#### **Our aims**

- To undertake research and practice development that is aligned with TPCH nursing strategy.
- To undertake research and practice development that impacts on the quality of patient care and improves outcomes.
- To extend nursing research capacity and capability, and enhance the research culture within the hospital and the university.
- To assist clinicians in research activities by providing mentorship and facilitation for research development, data collection, data analysis, and dissemination.
- To provide research ethics and governance guidance.
- To provide information regarding internal and external funding sources, and assist/collaborate with research grant applications.

- To support and co-write research articles for local, national and international conferences and peer reviewed journal publications.
- To assist clinical staff to obtain adequate funds to provide time away from their substantive roles to work on research projects.
- To support nursing staff to undertake higher degree by research (HDR) studies; supervised via the NRPDC.
- To provide HDR students with supervision, a research community, and office space and facilities to work on their research.

#### Governance

The NRPDC is governed by a Steering Committee, which meets to agree on and monitor the strategic direction and outcomes of the centre. Its members are:

Clinical Associate Professor Cherie Franks, Director of Nursing, TPCH; Professor Michelle Campbell, Executive Dean, Faculty of Health Sciences, ACU; Belinda Faulkner/Kevin Clark, Acting Nursing Directors, Clinical Effectiveness, TPCH; Professor Mary Courtney, Head, National School of Nursing, Midwifery and Paramedicine, ACU; Clinical Associate Professor Megan Lowe, Nursing Director, Education & Workforce, TPCH; Associate Professor Paula Schulz, State Head (Qld), School of Nursing, Midwifery and Paramedicine, ACU & Visiting Research Fellow, NRPDC, TPCH; Professor Paul Fulbrook, Nursing Director, Research and Practice Development, NRPDC, TPCH & Professor of Nursing, School of Nursing, Midwifery and Paramedicine, ACU.



The Prince Charles Hospital



# Personnel



#### Professor Paul Fulbrook RN; PhD, MSc, PGDipEduc, BSc (Hons)

Nursing Director

Paul was appointed as Professor of Nursing at ACU in late 2004. He began collaborating with TPCH in a mid-2008. This led to his establishment in a full-time jointly funded role at TPCH in mid-2009, as Nursing Director, Research and Practice Development. He has an active role in the research life of TPCH, and is a founder member of its Research Council, and a member of the Hospital Research Ethics Committee. Paul's clinical and research background is in intensive care nursing. He is well known for his critical care nursing work, has published widely in this field and spoken at many national and international conferences.

#### Clinical Associate Professor Melanie Jessup RN; PhD, BN (Hons)

#### **Research Fellow**

Melanie joined the NRPDC in 2013, bringing research experience from working with multi disciplinary, multi-site teams in paediatrics, emergency department and chronic respiratory illness. Her clinical background in paediatrics reflects a family-centred focus, with a particularly qualitative strength. Melanie mentors visiting researchers, supervises higher degree research students and facilitates research in the clinical setting. A key focus is developing the research program around falls: examining causes, context, culture and potential solutions, considering the experience of both the faller and the health professional. Melanie collaborates with teams researching family-centred care in cystic fibrosis, and efficacy of emergency department processes and flow.







#### Sandra Miles RN, RM; BN, MN (Child & Adol), PhD candidate

#### **Research Fellow**

Sandra is a Research Fellow working part time (0.4 WTE) in the NRPDC. Her role is to work with TPCH personnel to advance research and practice in the specialty area of pressure injury prevention and to publish and increase awareness of the quality activities undertaken in this area at the hospital. Sandra also works part time as a Lecturer in the School of Nursing, Midwifery & Paramedicine, at ACU. Sandra also supervises research students via the NRPDC.

#### Petra Lawrence RN; BN (Hons), PhD candidate

#### **Research Assistant**

Petra is an early career researcher and has worked at the NRPDC as a research assistant since November 2010. Currently, part-time, her projects involve nurses' knowledge of pressure injury management, and the early detection and treatment of psychological distress in emergency department attendees. She has presented her research at several conferences and is drafting several journal articles and reports.

#### Elyse Fitxpatrick RN; BN (Hons)

#### **Research Assistant**

Elyse is a part-time research assistant, currently on secondment from Redcliffe Hospital, where she works as an RN in the Medicine and Older Persons Service. Elyse collaborates with all members of the nursing research team, assisting with multiple research projects. She completed her Bachelor of Nursing Honours degree with ACU, researching pressure injuries in the emergency department.



# **Steering Committee**

The NRPDC is governed by a Steering Committee, which meets to agree on and monitor the strategic direction and outcomes of the centre. It is comprised of the following members					
Clinical Associate Professor Cherie Franks	Director of Nursing, TPCH	Professor Michelle Campbell	Executive Dean, Faculty of Health Sciences, ACU		
Clinical Associate Professor Megan Lowe	Nursing Director, Education & Workforce, TPCH	Professor Mary Courtney	Head, National School of Nursing, Midwifery and Paramedicine, ACU		
Kevin Clark	Acting Nursing Director, Clinical Effectiveness, TPCH	Associate Professor Paula Schulz	State Head (Qld), School of Nursing, Midwifery and Paramedicine, ACU		
Belinda Faulkner	Acting Nursing Director, Clinical Effectiveness, TPCH	Professor Paul Fulbrook	Nursing Director, Research and Practice Development, NRPDC & Professor of Nursing, ACU		

# TPCH and ACU Partnership Representatives



#### Clinical Associate Professor Cherie Franks RN; BN, Grad Cert Health Stud (Nurs), Dip Manage

Director of Nursing, The Prince Charles Hospital

Cherie is the Director of Nursing at The Prince Charles Hospital, Metro

North Hospital and Health Service. She is responsible and accountable for the provision of effective leadership, high level operational management and clinical expertise. Her passion and commitment is for clinical safety, patient outcomes and leading clinical service delivery in the provision of excellence. Cherie has a strong interest in nursing research and works collaboratively with the Nursing Director Research and Practice Development. She has a firm belief that it is necessary for nurses to use evidence base to inform improvement in care delivered and the services provided. Cherie is currently studying for her Masters in Health Administration at ACU.



#### Professor Mary Courtney, RN, RM; M&CHC; PhD, BA (Accounting), M Health Planning

National Head of School of Nursing, Midwifery and Paramedicine, Faculty of Health Sciences, ACU

Mary has worked in tertiary education for 24 years. She commenced as Head,

School of Nursing, Midwifery and Paramedicine at ACU in January 2012, having previously worked at the University of New England, Armidale for eleven years and Queensland University of Technology for thirteen years. She recently returned to Australia after a year at the University of British Columbia, Canada. Mary is a very active researcher, and has authored over 110 refereed articles, 25 book chapters and seven books. She has also received significant funding from ARC Discovery, ARC Linkage, and NHMRC grants. Her current research interests include: quality of life and family care giving; self-management; aged care and chronic disease; and intervention studies.





#### Clinical Associate Professor Megan Lowe, RN; BHSc, DipAppSc (Nursing Education), MA Admin Leadership

Nursing Director, Education and Workforce, TPCH

In her current role, Megan is responsible and accountable for the provision of effective leadership, high level operational management and clinical expertise. She is involved in the

planning coordination, formulation and direction of policies relating to the provision of nursing education, staff development and nursing workforce at TPCH to support excellence in clinical care. Megan has worked for Queensland Health for over 28 years and has held a number of senior nursing positions across clinical, educational and workforce fields. Over the last ten years, her interest in human error and patient safety has led to her active involvement in advocating for a just healthcare culture and teaching multidisciplinary teams about the role of system error in patient harm. Megan participated in a range of activities associated with visioning and bringing to life an interactive partnership with ACU in the development of a Clinical School.



#### Associate Professor Paula Schulz, RN; BA, BSci (Hons), MPsych, DPsych (Health)

State Head (Qld), School of Nursing, Midwifery & Paramedicine, ACU

Paula has worked in tertiary education for 21 years, and has held a number of academic leadership positions with the School and

Faculty at ACU. She completed her PhD in 2007, investigating the efficacy of a modified Theory of Planned Behaviour that included anticipated regret as an additional variable in determining the reproductive intentions of women. Her research interests lie in the area of positive psychology and resilience, chronic illness self management and health behaviour change. Paula has been instrumental in establishing the ACU Clinical School at TPCH.

# **Visiting Researchers**



#### Dr Jenneke Foottit, RN; PhD, MSocSc, BSocSc

Visiting Research Fellow

Jenneke lectures in the School of Nursing, Midwifery and Paramedicine at ACU (Brisbane). She completed her PhD in 2010. Her specialty is ageing and her research focus is on people

with dementia, particularly later stages. She is interested in issues around managing pain in cognitively impaired older adults, and the management of behaviours of concern in people with late stage dementia. Her earliest research work of people with dementia included working on a research project examining the use of case conferencing in the introduction of palliative care, systematic reviews on palliative care, use of supplements, and use of thickened fluids. She has been teaching in different levels of education in nursing: Bachelor, Diploma and Certificate III in Aged Care, and has worked in a variety of clinical settings such as; hospital, domiciliary, urban, regional, and different countries. Her personal commitment to research is due to her belief that research needs to inform the education provided to health professionals and that quality research and education are linked to good health outcomes. She believes health professionals need a strong grounding in both the science and art of their chosen field, fostered by good teaching and supported by good ongoing research and role modelling. Jenneke is working with TPCH colleagues on projects involving the use of ECT with dementia patients who have challenging behaviours and fall prevention in cognitively impaired patients.



#### Alison Peeler, RN; MPhil, PGCert (Paed), PGCert (Paed Int Care), GradDip (Neonat), PhD candidate

Visiting Research Fellow

Alison is based at the NRPDC one day per week, and lectures in the School of Nursing, Midwifery and Paramedicine at ACU (Brisbane) the remainder of the week. She has over twenty five years experience as a registered

nurse and has worked in many areas including education, research and management. For her Master of Philosophy degree, Alison researched parents' and nurses' experiences of respiratory support of children with respiratory distress syndrome due to acute bronchiolitis. Her PhD is in the area of paediatric emergency care, and is evaluating the new paediatric emergency department at TPCH.



#### Keith Skelton RN, MNurs Leadership, Grad Dip Health Science (Health Educ), BSc (Environ Stud), Crit Care Cert

Keith is a visiting researcher to the NRPDC, and lectures in the School of Nursing, Midwifery and Paramedicine at ACU (Brisbane) in nursing, mental health and

nursing science. Prior to this role he was employed as a technical officer, managing the science and clinical nursing laboratories concurrent with casual teaching. Before commencing at ACU, he was employed as a nurse educator at the Princess Alexandra Hospital (Brisbane) for two years, where he developed the first wound care course for staff, which led to involvement in several wound care research projects. Keith's research interests cover several areas: wound care, mental heath, and medication calculations. He is currently working with TPCH based colleagues who are investigating patient falls and nurse's knowledge of falls prevention.



#### Dr Roger Lord, PhD, BAppSc, ARCPA

#### Visiting Research Fellow

Roger has a background in both clinical biochemistry and immunology. He is a lecturer in Medical Sciences attached to the School of Science, Australian Catholic University and a Visiting Research Fellow with the NRPDC. Roger also serves as

a member of the Advisory Committee on Biologicals to the Therapeutic Goods Administration and is an Associate of the Royal College of Pathologists of Australasia. During his career he has made significant contributions to the development of a vaccine against Plasmodium falciparum (malaria) and in immunological mechanisms involved in liver transplantation tolerance. Roger is currently involved in the emerging science of proteomics and treatment strategies for chronic wound healing. Roger's main project at TPCH is titled A double blind trial of the application of 0.2% glyceryl trinitrate for the healing of chronic venous leg ulcers. Earlier studies suggested that the application of Rectogesic will have a significant effect on increasing the healing rates of these wounds. This confirmation will be a critical step towards larger studies looking at cytological and biochemical changes which are likely to take place with treatment. These studies have the potential to change the current medical management of a disease which is common in elderly members of society and likely to become more prevalent given Australia's aging population.



#### Sandra Hyde, RN; Mental Health Practitioner, MAdvPrac (Mental Health), MA (Educ & Work), BApplSci (Adv Nurs), PhD student

Visiting Researcher

Sandra is a Visiting Researcher to the NRPDC, and has been involved in several mental health research studies. Her

main role is Lecturer in the School of Nursing, Midwifery and Paramedicine at ACU (Brisbane). Sandra has worked in adult mental health in the acute and community settings, mental health consultation liaison, with clients who have a dual diagnosis in an acquired brain injury unit and in the Mental Health Information Unit as a Clinical Indicator Coordinator, and continues to collaborate in clinical mental health partnerships. She also has extensive experience in general medical surgical nursing. Sandra's areas of research interest include examining and enhancing the care of the consumer in the acute care setting, and the early detection and treatment of depression and anxiety in the general population.



#### Associate Professor Paula Schulz, RN; BA, BSci (Hons), MPsych, DPsych (Health)

#### Visiting Research Fellow

Paula is based at the NRPDC as a Visiting Research Fellow. She has worked in tertiary education for 21 years and is an academic staff member of ACU in the School of

Nursing, Midwifery and Paramedicine (Brisbane campus). She has held a number of academic leadership positions with the School and Faculty at ACU and is currently Deputy Head of School. Paula completed her PhD in 2007, investigating the efficacy of a modified Theory of Planned Behaviour that included anticipated regret as an additional variable in determining the reproductive intentions of women. Her research interests lie in the area of positive psychology and resilience, chronic illness self management and health behaviour change.



# **Associate Researchers**



#### Alissa Anderson, RN; BA, BN, Grad Cert

Intensive care nurse researcher

Alissa is a registered nurse currently working in the adult intensive care unit (ICU) at TPCH. She holds a Graduate Certificate in intensive care nursing and has worked in this area for five years. She is currently undertaking a mentored research project via the NRPDC, which is

systematically investigating the research evidence surrounding the prevention of pressure injuries in critically ill and highly immobile patients, especially those receiving extracorporeal membrane oxygenation (ECMO). Alissa is also the successful recipient of a TPCH Foundation Novice Research grant with Professor Fulbrook as her mentor. The first phase of her research evaluated the validity and reliability a recently developed and validated Spanish pressure injury risk assessment tool, the COMHON Index, which has been developed specifically for intensive care patients. The second phase, is investigating its predictive validity.



#### Stephanie Gettens, RN; BN

Internal Medicine/Quality Effectiveness Support Team nurse researcher

Stephanie is clinical nurse at TPCH and works in the Early Medical Assessment Unit and the Quality Effectiveness Support Team. She is the project officer for falls prevention and has worked on several projects with Professor

Fulbrook. Stephanie was awarded a Novice Research grant from TPCH Foundation, with Professor Fulbrook as her mentor, to investigate 'fear of falling' and its relationship to clinical outcomes, such as hospital length of stay. Her study on falls is highly relevant to TPCH and will provide valuable data that will help to provide the basis for practice development and will form the foundation for further larger studies. Stephanie has enrolled in a Master of Philosophy degree at ACU through which she is continuing her research regarding falls prevention. Her supervisors are Professor Paul Fulbrook, Professor Nancy Low Choy and Dr Melanie Jessup.



#### Pauline Hughes, RN; Dip Higher Educ Nurs

Community nurse practitioner researcher

Pauline is a Nurse Practitioner - Respiratory, employed in the Heart Lung team, within Primary and Community Health Services (P&CHS). Prior to gaining a Masters Degree in chronic disease specialising in respiratory

in July 2010, she worked as a respiratory nurse in both the UK and Australia. With the help of a group of researchers and specialists across the district, led by Professor Paul Fulbrook and Associate Professor Ian Yang from TPCH, a chronic disease research grant was obtained, to investigate oxygen concordance. The data have now been collected and analysed and a publication is in preparation. As part of the research a motivational interview (MI) tool was developed that will help clients with COPD to make health care choices that are evidence-based.



#### Damian Williams RN; BNSc, Grad Cert Clin Nsg, Cert IV WPAT N

Wound care researcher

Damian Williams is a Registered Nurse and has been directly involved in delivering advanced wound management services for over 16 years. His current position is Clinical Nurse Consultant for Wound Management at TPCH. Damian is actively involved in gaining knowledge and

promoting best practice wound management. He holds post graduate gualifications in wound management, conducts regular wound management education and has presented at conferences at both state and national level. Damian has held committee positions on both the Australian Wound Management Association (AWMA) National Committee and Queensland Committee, and is a past President of the Australian Wound Management Association (Queensland) and the current website manager for AWMA (Queensland). Damian is collaborating on several research projects with the NRPDC. He received a TPCH Foundation Novice Researcher grant for his first project, which is comparing two different dressings for use with skin tears. Professor Fulbrook is research mentor for this project. He is also a co-researcher in Dr Lord's project, investigating the use of glyceryl trinitrate ointment for the treatment of venous leg ulcers. Recently, with Professor Fulbrook, he obtained a grant to investigate the use of a prophylactic sacral dressing to prevent pressure injuries in elderly patients.



#### Kelly Trudgen RN; BN, MCN (Emergency)

#### Emergency department researcher

Kelly began her career at the Royal Adelaide Hospital and has consolidated her clinical skills and knowledge with a variety of experience in peri-operative, emergency and Military nursing. She is accredited as an Advanced

Practice Nurse in Emergency Nursing, and has attained a Masters in Clinical Nursing (Emergency) via University of Tasmania. Kelly was a research assistant on the emergency department Nurse Navigator implementation and evaluation project. She has developed a keen interest in how research enables evidence based practice in the clinical setting for the benefit of patient outcomes.



Vainess Mbuzi, RN, BN, MN (Primary Health Care), MN Advanced Practice (Health Professional Education), Grad Dip (Intensive care Nursing), PhD candidate

Critical care researcher

Vainess is a Clinical Nurse currently working in the Adult Intensive Care Services at TPCH. She has over 30 years of experience as a registered nurse and has worked in a variety of areas, including education and management, overseas and in Australia. She holds a graduate diploma in intensive care nursing, Master of Nursing in Primary Health Care, and Master of Advanced Practice in Health Professional Education. Vainess is a PhD candidate and is investigating Indigenous peoples' experiences of acute cardiac care. She is a successful recipient of TPCH Foundation New investigator grant, with Professor Fulbrook as her mentor.



#### **Catherine Saxon RN**

#### Respiratory care researcher

Cathy is a Clinical Nurse in Endoscopy and Procedural Services at TPCH and a Nursing Research Student with the Australian Catholic University. She is currently collecting data for her project "What are high risk respiratory patients' experiences

in bronchoscopy with "cautious" sedation and analgesia; a qualitative study". To help fund this project she received a grant from The Prince Charles Hospital Foundation in 2014. Cathy has presented preliminary results from her study at the Australian Gastroenterology Week in October 2014 and described her nursing research journey at a Gastroenterological Nurses College of Australia education evening in November 2014. Catherine is working towards completing her masters by December 2016.

# **Research Collaborators**

Collaborators	University and other organisations	
Dr Justin Boyle	Australian E-Health Research Centre, CSIRO	
Professor Rose Chapman	Faculty of Health Sciences, ACU	
Dr Aaron Conway	Research Fellow, Queensland University of Technology	
Professor Maureen Coombs	Victoria University, Wellington	
Dr Michelle Davison	Paediatric Emergency Specialist, Department of Emergency Medicine, TPCH	
Dr James Douglas	Director, Sleep Disorders Centre, TPCH	
Dr Usha Gurunathan	Senior Staff Specialist Anaesthetist, TPCH	
Professor Kwon Fung	Heart & Lung Institute, TPCH	
Dr Frances Kinnear	Emergency Specialist, Department of Emergency Medicine, TPCH	
Associate Professor Liz McInnes	Deputy Director, Nursing Research Institute, St. Vincent's Hospital, Sydney	
Professor Nancy Low Choy	Professor of Physiotherapy, ACU and TPCH	
Dr Colin Myers	Department of Emergency Medicine, TPCH	
Dr Jeffrey Rowland	Director of Physician Education, Internal Medicine, TPCH	
Associate Professor Shawn Somerset	School of Public Health, ACU	
Dr Judith Sheridan	(Past) Principal Research Fellow, Allied Health, TPCH	
Professor Linda Shields	James Cook University	
Professor David Thompson	Faculty of Health Sciences, ACU	
Associate Professor Kerrianne Watt	James Cook University	
Professor Nereda White	Institute for Positive Psychology and Education, ACU	
Associate Professor Ian Yang	Consultant Thoracic Physician, TPCH	



# Post Graduate Research Students

Research Student Degree		Supervisors	Thesis title	
Research Student	Degree	Supervisors	Thesis title	
<sup>°</sup> Sandra Miles	Doctor of Philosophy	<sup>°</sup> Prof. Paul Fulbrook Debra Betts	Able-Bodied Children: Development and Education	
°Petra Lawrence	Doctor of Philosophy	<sup>a</sup> Prof. Paul Fulbrook Assoc. Prof. Shawn Somerset <sup>a</sup> Assoc. Prof. Paula Schulz	A randomised controlled trial of a psychosocial brief intervention for emergency department attendees with moderate psychological stress	
<sup>β</sup> Vainess Mbuzi	Doctor of Philosophy	<sup>a</sup> Prof. Paul Fulbrook Prof. Nereda White <sup>a</sup> Clin. Assoc. Prof. Melanie Jessup	Indigenous people's experiences of acute cardiac care	
°Alison Peeler	Doctor of Philosophy	<sup>α</sup> Prof. Paul Fulbrook Prof. Rose Chapman <sup>β</sup> Dr Frances Kinnear	Evaluation of a paediatric emergency department	
Kodchanipa Phonpruk	Doctor of Philosophy	Prof. Karen Flowers <sup>©</sup> Prof. Paul Fulbrook Prof. Geraldine Naughton	Discharge information provided to parents whose child has attended the paediatric emergency department	
<sup>β</sup> Lynn Hoey	Doctor of Philosophy	<sup>a</sup> Prof. Paul Fulbrook <sup>a</sup> Dr Roger Lord <sup>β</sup> Dr James Douglas	Sleep quality in acute hospitalised patients	
<sup>β</sup> Stephanie Gettens	Master of Philosophy	<sup>a</sup> Prof. Paul Fulbrook <sup>β</sup> Prof. Nancy Low Choy <sup>a</sup> Clin. Assoc. Prof. Melanie Jessup	Psychosocial implications of sustaining a fall while in hospital	
<sup>β</sup> Cathy Saxon	Master of Nursing (Research)	<sup>α</sup> Prof. Paul Fulbrook <sup>β</sup> Prof. Kwun Fong	Patients with chronic respiratiory disease: experiences of bronchospy	



Clinical Sciences Building TPCH

αNRPDC <sup>β</sup>TPCH

# Completed Research Projects

#### PRESSURE INJURY PREVENTION

## Validity and reliability of a pressure injury risk assessment tool for intensive care patients

#### <sup>α</sup>Paul Fulbrook, <sup>β</sup>Alissa Anderson

The incidence of pressure injuries is a key clinical indicator of the standard and effectiveness of care. However, in the intensive care setting, despite interventions aimed at their prevention, their incidence is relatively high. The aim of this study was to evaluate the application of the a new pressure injury risk assessment tool, designed specifically for intensive care: the COMHON index. The objectives are to: evaluate the validity and reliability of the COMHON Index within an adult Australian ICU population; compare the appropriateness of the COMHON Index with three commonly used – but non-ICU-specific - internationally used scales i.e. Waterlow, Braden, and Norton scales; and identify common risk factors of PI development in adult ICU patients. The results demonstrate the the COMHON Index possessed the best inter-rater reliability and was strongly correlated with both the Braden and Norton scales. Dissemination: the study has been presented at several conferences and an article is under review for peerreviewed publication.

## Survey of nurses' knowledge of skin integrity and its management

#### <sup>α</sup>Petra Lawrence, <sup>α</sup>Sandra Miles, <sup>α</sup>Paul Fulbrook, <sup>β</sup>Cherie Franks et al.

A district wide skin integrity knowledge survey was undertaken to determine nursing staff knowledge on the topic of pressure injury prevention, skin tears and incontinence associated dermatitis. These injuries cause significant patient harm and increase hospital length of stay, yet are largely preventable. A quantitative cross sectional survey of nursing staff across the Metro North Health Service District used a proportional stratified sample of all facilities and levels of nurses. The voluntary survey was online and anonymous. Over 800 nurses completed the survey. The results indicated that overall nurses' knowledge was good, but also identified several areas where knowledge was weak and requires further education. When compared to other similar studies in other countries, Queensland nurses' knowledge was similar or better. Dissemination: a peer-reviewed publication is in press plus several conference papers have been presented.

#### Is waiting time in the emergency department associated with hospital acquired pressure injury occurrence?

<sup>α</sup>Elyse Fitzpatrick, <sup>α</sup>Sandra Miles, <sup>α</sup>Jenneke Foottit, <sup>α</sup>Paul Fulbrook, <sup>β</sup>Frances Kinnear

Pressure injuries (PI) are recognised worldwide as an adverse event of hospitalisation, impacting considerably on patient quality of life and increasing healthcare costs. The most common point of entry to hospital is via the Emergency Department (ED), where length of stay can exceed two hours. A retrospective chart audit was undertaken for 78 patients admitted via TPCH ED who were subsequently reported to have sustained a PI during their stay, with the timeframe chosen around the introduction of the National Emergency Access Targets [NEAT] in Australian hospitals. The mean ED length of stay for these patients was over eight hours, with a range of 1:46-20:23 hours. No significant difference between length of stay pre- and post- NEAT introduction, and no significant relationship between ED length of stay and pressure injury development was able to be demonstrated due to lack of difference in mean EDLOS pre-and-post NEAT implementation. However, a description of patients likely to acquire a PI was achieved, and, based on the age and characteristics of typical ED presentations, recommendations regarding resource investment to enhance early PI prevention practices in ED can be made to further reduce the risk of possible hospital acquired PI. Further recommendations are made regarding increasing nursing knowledge of PI risk factors and PI prevention strategies in the ED, while further research may determine the need for better PI prevention resources and nurse staffing in the ED. .

#### **EMERGENCY CARE**

#### Validity of the Paddington Alcohol Test in an Australian general emergency department

<sup>a</sup>Paul Fulbrook, <sup>a</sup>Petra Lawrence, Kerrianne Watt

In this study a cross sectional survey was used to screen patients attending an Australian tertiary hospital emergency department (ED). Data were collected over a three month period at randomly allocated time periods and days. Consenting participants were screened using a modified-for-Australia version of the Paddington Alcohol Test (AusPAT) and the Alcohol Use Disorders Identification Test (AUDIT). The association between the two tools was investigated, as well as the sensitivity and specificity of AusPAT at various AUDIT cut-off scores and by gender and age group. The sample comprised 637 emergency department attendees. The mean AUDIT score was 5.21 (SD 6.58). Most attendees consumed alcohol, and a quarter was AusPAT-positive. AusPAT demonstrated a moderate fit with AUDIT at a cut-off score of 8. At this cutoff, a quarter of participants were identified by AUDIT as problematic drinkers; AusPAT sensitivity was 72.5% with a specificity of 86.9%. Our results indicate that AusPAT is moderately well associated with AUDIT. When used universally in the emergency department setting, its sensitivity and specificity were moderate.

#### Provision of a new children's emergency service: an investigation of the utility of a multidisciplinary simulation exercise with respect to staff awareness and preparedness

<sup>β</sup>Michelle Davison, <sup>β</sup>Fran Kinnear, <sup>α</sup>Paul Fulbrook This research studied the effect of a multidisplinary simulated opening day of the new children's emergency service on both staff knowledge of workplace practices and flows for children presenting to the service and staff confidence regarding the proposed workplace change. It used quantitative and qualitative pre- and postintervention. The results found that the intervention was effective. Dissemination: the study has been presented at

### Emergency department patient admission predictive tool: evaluation of user experience

a national conference and a publication is under review.

<sup>a</sup>Melanie Jessup, Justin Boyle, Julia Crilly, James Lind, David Green, Mariann Wallis, Gerry Fitzgerald Emergency department (ED) overcrowding is an increasing issue impacting patients, staff, and quality of

care, resulting in poor patient and system outcomes. In order to facilitate better management of ED resources, a patient admission predictive tool (PAPT) was developed and implemented. Evaluation of the PAPT's accuracy and efficacy was complemented with a qualitative explication of the experiences of users and its impact on their management strategies. The use of a PAPT, embedded in patient flow management processes and championed by a manager, can facilitate efficacious patient flow, bed and staff management. Publication in press.

## Estimated prevalence of mental health disorders in an Australian emergency department

<sup>a</sup>Paul Fulbrook, <sup>a</sup>Petra Lawrence

The aim of this study was to determine the prevalence of mental health disorders in Australian general emergency

department (ED) attendees. A cross sectional survey was used to screen a convenience sample of 708 ED attendees, who were screened using the Kessler Psychological Distress Scale (K10). The mean K10 score was 20, with a significant proportion categorised as having high or very high psychological distress. Across all gender and age groups, mean K10 scores were higher than Australian population norms. When post-probability calculation was performed based on observed K10 scores, it was estimated that nearly a guarter of participants had a mental health disorder. The results suggest the prevalence of mental health disorder is significantly higher in emergency department attendees than Australian population norms. There is potential to screen all emergency department attendees for the presence of mental health disorder; early identification of mental illness would enable early referral for treatment, which can reduce its progression and complications, and may improve long-term outcomes.

#### FALLS INJURY PREVENTION

## Fear of falling and its association with hospital length of stay

<sup>β</sup>Stephanie Gettens, <sup>α</sup>Paul Fulbrook

A prospective observational study investigating fearing of falling using the Modified Falls Efficacy Scale (MFES). The results indicated that patients with lower MFES scores have significantly longer hospital stays. Dissemination: the results have been presented at several conferences and published in a peer-reviewed journal.

#### CARDIAC/THORACIC CARE

A pilot study of nurse-led screening for anxiety and depression in adult heart transplant recipients followed by referral for cognitive behavioural therapy and co-ordination of communication with on-going specialist

Aaron Conway,  $^\beta$ Judith Sheridan, Patsy Yates,  $^\beta$ Joanne Maddicks-Law <code>aPaul Fulbrook</code>

The main aim of this study is to assess the feasibility of telephone-delivered cognitive behavioural therapy followed by case-conferencing with specialist and primary care services to improve psychological and clinical outcomes for heart transplant patients. The data from this pilot study will be used to determine the likely recruitment and attrition rates as well as estimate the sample size for an adequately powered clinical trial. A secondary aim was to determine the validity of brief, selfadministered tools to screen for anxiety and depression in heart transplant recipients. Several peer-reviewed articles are in preparation.

## Competencies and standards for heart failure specialist nurses

<sup>β</sup>Maria Podger, Robyn Peters, <sup>α</sup>Paul Fulbrook

A Queensland statewide modified Delphi survey. Key standards for nursing practice were identified. Dissemination: the results have been presented at several conferences and a publication is being prepared for peer review.

### Information needs of parents of children newly a diagnosed with cystic fibrosis

Linda Shields, <sup>a</sup>Melanie Jessup, Cindy Branch-Smith, Lynn Priddis, Tonia Douglas (ArestCF)

Diagnosis cystic fibrosis (CF) is a landmark event. Content and delivery of initial education exert a powerful influence on adjustment to diagnosis and ensuing engagement with the care team. This study is investigating education needs and information seeking behaviours of parents whose child is diagnosed with CF. Following an in-depth qualitative inquiry with a cohort of parents, a questionnaire has been created, validated and piloted in a small convenience sample of respondents, and will now be administered nationally.

#### **MENTAL HEALTH CARE**

### Use of ECT for severe behaviour concerns in people with late stage dementia

<sup>α</sup>Jenneke Foottit, <sup>β</sup>Wendy Austin, <sup>α</sup>Paul Fulbrook

A retrospective chart audit of a cohort of patients admitted to the Confusion Assessment and Management (CAM) unit at TPCH with dementia causing severe behavioural problems that were treated with electroconvulsive therapy. Outcomes were described and analysed. Dissemination: TPCH Grand Rounds and a publication is being prepared for peer-reviewed publication.

## Use of a comfort room for distressed people in acute mental health settings: a thematic analysis of perspectives from consumers and staff

#### <sup>a</sup>Sandra Hyde, <sup>a</sup>Sandra Miles, <sup>a</sup>Paul Fulbrook

This study investigated implementation of a comfort room as an alternative to seclusion in an Australian mental health setting. The processes of implementing a chill-out or comfort zone, otherwise known as a comfort room, were explored from the perspectives of staff and consumers. Thematic analysis of interview transcripts revealed four themes, including the purpose, safety, ownership of, and access to, the comfort room. While staff and consumers agreed on the benefits of implementing a comfort room, a contradiction emerged regarding the purpose and ownership of the room. Where consumers wanted to use the room as desired to participate in their own self-management, staff wanted to identify patients who needed to use the room and thus control access to the room. It is clear that the purpose of a comfort room needs to be identified by a facility's staff and patients prior to implementation to avoid clashes of ownership. Developing a decision making framework or guidelines around the use of the comfort room is recommended. Dissemination: Several conference papers have been presented and a peer-reviewed journal article is in preparation.

#### **OTHER RESEARCH**

#### Certainty and uncertainty about end of life care nursing practices in New Zealand intensive care units: a mixed methods study

Maureen Coombs, <sup>a</sup>Paul Fulbrook, Kay deVries, Sarah Donovan

The objective of this study was to investigate New Zealand intensive care nurses' experiences of, and attitudes towards end-of-life (EOL) care, using a survey and focus groups. 203 nurses participated in the survey and 18 nurses participated in follow-on focus groups. Over half of nurses surveyed disagreed that withholding and withdrawing life support treatment were ethically the same. Most nurses stated that withholding treatment was ethically more acceptable than withdrawing it. Whilst nurses generally supported reducing inspired oxygen to air for ventilated patients at EOL this was also an area that demonstrated one of the highest levels of uncertainty. Just under a guarter of respondents were also uncertain about the use of continued nutritional support, continued passive limb exercises and use of deep sedation during EOL. The 18 nurses who participated in follow-on focus groups detailed the supportive, culturally sensitive, collaborative environment that EOL was conducted in. However diverse opinions and understandings were held on the use of passive limb and use of fluids at EOL. Whilst results from this NZ study broadly align with European studies, uncertainty about specific areas of EOL practices highlight that further guidance for nurses is required. Dissemination: Findings have been presented at international conferences and a peer-reviewed article has been published.

## World Survey of critical care nursing organisations

Ged Williams, <sup>a</sup>Paul Fulbrook, Ruth Kleinpell, Shelley Schmollgruber, Laura Alberto

The aim of this study was to identify national critical care nursing organisations, their roles, and nursing issues faced in their countries. Several issues were found to challenge critical care nursing, and there were differences in priorities between lower and higher income nations. Collaborative approaches between the spacialty, nursing leaders and health policy advisors will assist to inform needed change. Findings have been presented internationally and a peerreviewed publication is under review.



# **Current Research Projects**

## PRESSURE INJURY PREVENTION AND WOUND MANAGEMENT

## Systematic review of interventions to reduce pressure injury in immobile critically ill patients

<sup>β</sup>Alissa Anderson, <sup>α</sup>Petra Lawrence, <sup>α</sup>Paul Fulbrook

Pressure injury (PI) prevention in critically ill patients features prominently in current research literature, as it is a key clinical indicator of the effectiveness of care; critically ill adults are often at higher risk than other patients. The impetus for this review arose from clinical concerns about the relatively high incidence of occipital PI in TPCH extra-corporeal membrane oxygenation (ECMO) patients, due to their being immobile and supine for prolonged periods of time. Thus, the initial inquiry via the research literature was focused on risk factors and methods of PI prevention for this group. However, the first search revealed an absence of research on this topic. The search remit and terms were therefore expanded to cover PI risk and prevention in all immobile critically ill patients. Thus, the aim of this review is to critically evaluate the effectiveness of interventions aimed at preventing PI in immobile critically ill patients.

#### Adhesive silicone foam dressing versus meshed silicone interface dressing for the management of skin tears: a comparison of healing rates, and patients' and nurses' satisfaction

#### <sup>β</sup>Damian Williams, <sup>α</sup>Paul Fulbrook, <sup>α</sup>Jodie Lay

Point prevalence audits within TPCH between 2009 and 2011 have yielded skin tear prevalence results between 5.38% and 12.59% and 95% of skin tears were on patients over the age of 65. The main goal of this study is to compare two standard dressings in terms of their skin tear healing times. Secondary goals are to assess nurses' satisfaction with the dressings (fit for purpose) and patients' satisfaction (comfort et cetera). This will also enable a cost-benefit comparison to be made.

## Application of 0.2% glyceryl trinitrate ointment for the healing of chronic venous leg ulcers

<sup>a</sup>Roger Lord , <sup> $\beta$ </sup>Damian Williams, <sup>a</sup>Sandra Miles, <sup>a</sup>Paul Fulbrook, <sup> $\beta$ </sup>Ewan Kinnear, <sup> $\beta$ </sup>Jeffrey Rowland

A small study by Roger Lord showed that glyceryl trinitrate, the active ingredient in rectogesic ointment, increased production of nitric oxide in venous leg ulcers. This resulted in vasodilation and immune system activation at the wound site, helping to clear bacterial load and promote wound closure. This new study will recruit a larger sample to reach statistical significance. Consenting patients with venous leg ulceration, confirmed with the use of transdermal oxygen sensors, will be randomly allocated to a control (usual treatment) or experiment (application of 0.2% glycerol trinitrate) group. Planimetry will be used for baseline measurements of ulcer size and to ascertain healing rates at weekly visits over four to six weeks, to monitor whether treatment is having an effect.

#### **EMERGENCY CARE**

#### Implementation and evaluation of an emergency department 'Navigator' role to improve timely delivery of patient care

#### <sup>α</sup>Paul Fulbrook, <sup>β</sup>Frances Kinnear, <sup>α</sup>Melanie Jessup

Delayed treatment in the emergency department (ED) is a major healthcare issue. Over a twenty week period a new nursing role was implemented in the ED. This novel role was to troubleshoot factors contributing to patient delays. The results indicate that the Navigators significantly reduced average ED length of stay by around five minutes per patient, and contributed to reduced times at all stages of the ED patient's journey. The role was evaluated using mixed methods and staff were found to be supportive. Further analysis is being performed and it is intended to undertake a cost-effectiveness analysis of the role. The study was funded by a research grant from the Australian Centre for Health Services Innovation.

## Efficacy of a brief intervention for emergency department attendees with moderate to high psychological distress

<sup>a</sup>Petra Lawrence, <sup>a</sup>Paul Fulbrook, <sup>a</sup>Paula Schulz, Shawn Somerset, <sup> $\beta$ </sup>Cathy Boyle, <sup> $\beta$ </sup>Frances Kinnear

This study is investigating the efficacy of a brief intervention (motivational interview) in terms of health outcomes for emergency department (ED) attendees who present with moderate to high psychological distress. The Kessler Psychological distress Scale is being used to screen for distress. Particpants are being followed up for one year.

#### Provision of a new paediatric service: an investigation of staff's perceptions and experience of the transition from an adult emergency department

<sup>α</sup>Alison Peeler, <sup>α</sup>Paul Fulbrook, <sup>β</sup>Frances Kinnear

This research studied the opening of a separate paediatric emergency department at TPCH from the viewpoint of the staff directly affected. It is using quantitative and qualitative analysis of data from a combination of surveys

αNRPDC <sup>β</sup>TPCH

and interviews. These will examine readiness, progress and effects (real and perceived) of the change process at different stages i.e. before, during and after. The surveys were administered widely to staff affected involving different levels and different disciplines. The interviews were conducted with a more limited number of staff representatives of the different groups. The information obtained may help guide the process and should also be of use in planning future similar changes here and elsewhere.

#### FALLS INJURY PREVENTION

## Patients' experiences of sustaining an in-hospital fall: how is confidence affected?

 $^\beta Stephanie Gettens, ^a Paul Fulbrook, ^a Melanie Jessup, <math display="inline">^\beta Nancy Low Choy$ 

The aim of this study is to investigate the lived experience of patients who have fallen while in hospital. Through greater understanding of how a fall affects the confidence of the person experiencing this phenomenon - not only physically but also emotionally - it is intended to glean an approach to falls prevention that is more central and individualised to each patient. People who have fallen may provide health professionals with a deeper understanding and a broader knowledge of how living with the risk of falling affects their day to day life. This qualitative study will utilise a hermeneutic phenomenological framework. Together with the results from the previous study, this study will provide valuable information that may lead to a different approach to fall prevention strategies for the hospital inpatient.

#### CARDIAC/THORACIC CARE

## Indigenous people and their families' experiences of cardiac care in a hospital setting

 $^\beta$  Vainess Mbuzi,  $^\alpha$  Paul Fulbrook, Nereda White,  $^\alpha$  Melanie Jessup

This project is in its early stages, and is employing a mixed methods design. The aim is to understand how Indigenous people experience acute cardiac care, in order to inform the provision of culturally sensitive care. It is part-funded by a research grant from TPCH Foundation. Dissemination: two articles are currently being prepared for peer-reviewed publication.

#### Family-centred care in cystic fibrosis

#### Linda Shields, Melanie Jessup, Tonia Douglas

This study is investigating the implementation and applicability of family-centred care as a model of care for families in which a member with cystic fibrosis (CF), to determine if what has come to be acknowledged as an ideal model is a) implemented in CF care in Australia, and b) relevant and applicable in that care delivery, particularly for those families living in remote settings. A qualitative component complemented by a set of validated and trialed tools are being used.

#### High risk respiratory patient's experiences of bronchoscopy with cautious sedation and analgesia: a qualitative study

#### <sup>β</sup>Cathy Saxon, <sup>α</sup>Paul Fulbrook, <sup>β</sup>Kwun Fong

Sedation for bronchoscopy is dependent on the preferences of the physician. Sedation is used to alleviate negative symptoms associated with bronchoscopy such as anxiety, amnesia, pain, cough and dsypnoea and has been associated with the patients' willingness to repeat the procedure. Analgesia is often combined with sedation due to its analgesic and antitussive affects. Cautious sedation/ analgesia is provided to patients with respiratory disease who are at higher risk during bronchoscopy. A clinical problem has been identified when the nurses assisting with patient airway management during bronchoscopy observe patients' distress due to discomfort. Although there have been many studies that have investigated bronchoscopy with cautious sedation, none have investigated the patients' experience qualitatively. The aim of the project is to understand the lived experience of high risk patients that undergo bronchoscopy with cautious administration of sedation and analgesia. The findings will be used to inform bronchoscopy practice. A phenomenological approach will be followed, based on the methods described by Van Manen. The research study is being conducted at The Prince Charles Hospital.

#### **OTHER RESEARCH**

## Perioperative changes in elderly patients undergoing hip fracture surgery

 ${}^{\beta}$ Usha Gurunathan,  ${}^{\beta}$ Chris Stonell, "Paul Fulbrook,  ${}^{\beta}$ Bernadette Brown

The main aim of this study is to assess the perioperative changes in patients undergoing surgery for proximal femural fractures. The secondary aims are to: calculate the prevalence of hypothermia in patients on arrival to the post anaesthetic care unit; and evaluate the association between occurrence of hypothermia and post-operative length of stay in the recovery room.

#### Pilot study of waist circumference as a predictor of major post-operative adverse outcomes following elective non-cardiac surgery

<sup>β</sup>Usha Gurunathan, <sup>β</sup>Kate Hallinan, <sup>β</sup>Ivan Rapchuk, <sup>β</sup>Peter Baker, <sup>β</sup>Gemma Duncan, <sup>α</sup>Paul Fulbrook

The main aim of this risk-adjusted cohort study of surgical patients is to estimate the ability of waist circumference to predict major operative adverse outcomes. Secondary aims are to: compare the predictability of waist circumefernce with body mass index to predict post-operative adverse events; to evaluate the role of surrogate makers (waist:hip ratio, body mass index, neck circumference) to predict postoperative adverse events; and to estimate the length of stay and costs incurred during the primary hospital admission as predicted by waist circumference.



# **New Research Projects**

### PRESSURE INJURY PREVENTION AND WOUND MANAGEMENT

#### Evaluation of a silicone gel adhesive hydrocellular foam dressings for the prevention of sacral pressure injuries in hospitalised elderly patients

<sup>α</sup>Paul Fulbrook , <sup>β</sup>Damian Williams, <sup>α</sup>Sandra Miles, <sup>β</sup>Julia Strothers

The primary aim of this study is to compare the effect of a shaped silicone gel adhesive hydrocellular foam dressing to standard care on the development of sacral pressure injury in at risk elderly patients in a sub-acute hospital ward. The secondary aims are: to evaluate dressing comfort from the patient's perspective; to evaluate dressing utility from the nurse's perspective; and to quantify the direct costs associated with use of the foam dressing. The design is an open label randomised observational study of patients admitted the Geriatric Evaluation Medicine (GEM) unit at TPCH.

#### The presence of pressure injury in patients admitted to the emergency department via ambulance: pilot descriptive study

 ${}^{\alpha}\text{Paul}$  Fulbrook,  ${}^{\alpha}\text{Sandra}$  Miles, Elizabeth McInnes,  ${}^{\beta}\text{Frances}$  Kinnear, Fiona Coyer

The study aim is to determine the prevalence of pressure injury (PI) presence in adult patients arriving at an emergency department (ED) by ambulance. The objectives of this study are to: describe the relationship between the presence and stage of PI identified on presentation to ED and the presence and grade of PI identified when patients are admitted to the wards; examine the association between various factors (patient-related; pre-ambulance arrival condition; length of ambulance journey; patient position in ambulance; stretcher surface) and the presence of PI; and examine the association between PI presence on admission to the ward and various timed events (ambulance call; ambulance pick up; ambulance arrival in ED; length of stay in ED).

## Waiting time in the emergency department and hospital acquired pressure injury: a matched control study

<sup>a</sup>Elyse Fitzpatrick, <sup>a</sup>Paul Fulbrook, <sup>a</sup>Sandra Miles

The overall intent of this project is to examine the effect of emergency department (ED) waiting times to identify risk factors associated with pressure injury development during the early stages of a patients episode of care. Building on a previous study, this project will examine the relationship between ED LOS and the presence of PI in hospitalised patients by conducting a retrospective chart audit. Initially, the medical records of patients admitted to hospital via the ED in the three months before and after the implementation of the NEAT, that subsequently developed a PI during their hospital stay, will be examined. These cases will then be matched with patients who were also admitted to hospital via the ED during this period but did not sustain a PI (controls) during their episode of care. The medical records of both cases and controls will be compared to identify factors associated with PI development.

## Nurses' knowledge of pressure injury prevention and management

#### <sup>a</sup>Petra Lawrence, <sup>a</sup>Paul Fulbrook, <sup>a</sup>Sandra Miles

Building upon a previous research study that was conducted across the health service district, this study will investigate TPCH nurses' knowledge levels. A proportional, stratified sample of nurses will be recruited and will be surveyed using the Pieper Zulkowski Pressure Ulcer knowledge Tool (PZ-PUKT).

#### **EMERGENCY CARE**

#### An investigation of the provision of discharge information to parents to care for their child postdischarge from the emergency department: A mixed methods study

Kodchanipa Phonpruk, Karen Flowers, Geraldine Naughton, <sup>a</sup>Paul Fulbrook, George Mnatzaganain

Presenting to an Emergency Department (ED) can be an anxious time for children and their families, as the need for treatment is urgent. The overall aim of this study is to investigate parents' perceptions of, and responses to discharge information to assist in managing their child post discharge from the ED. The objectives are to explore: factors in the ED setting that impact on parents' understanding of discharge information; ED nurses' perceptions of enablers and barriers to parents' understanding of discharge information; and parents' perceptions of the discharge information they received from the ED. This study will employ mixed methods, gathering data from various sources, including document review, non-participant observation, survey and a focus groups.

#### FALLS INJURY PREVENTION

#### Falls knowledge survey

Keith Skelton, <sup>a</sup>Melanie Jessup, Nancy Low-Choy N, <sup>a</sup>Jenneke Foottit J, <sup>B</sup>Stephanie Gettens S, <sup>a</sup>Jodie Lay

The aim of this project is to conduct a district wide survey on the topic of falls to ascertain health professionals' current knowledge of falls: their impact and prevention. A questionnaire is being developed to identify potential gaps in knowledge and to inform further research and education. Funded by a research grant from TPCH Foundation.

On the right track for falls prevention: implementation and evaluation of a nurse-led emergency department pathway involving screening, interdisciplinary assessment andreferral of patients for community-based support following a fall.

<sup>a</sup> Paul Fulbrook, <sup>a</sup> Melanie Jessup, <sup>β</sup> Stephanie Gettens, <sup>β</sup> Andrew Carter, <sup>β</sup> Amanda Tully, <sup>β</sup> Nancy Low Choy, <sup>β</sup> Frances Kinnear, <sup>β</sup> Jeffrey Rowland

The overall aim of this project is to demonstrate the feasibility and effectiveness of streamlining the processes of assessment and early management of ED presentations

of fallers utilising an integrated ED Falls Pathway. Falls are extremely common and represent a major health problem for older people; 30-40% of people over 65 and half of those over 80 will have a fall in one year, often with major health complications. Most people who present to an emergency department (ED) following a fall do not require hospitalisation; however, of those discharged home, around 20% will represent to hospital within 3 months. This project will implement and evaluate a nurse-led program in the ED to identify and screen people who have fallen, so that an individual and in-depth assessment by key health professionals can be provided followed by relevant referrals for community support services on discharge home. It is anticipated that this program will help to reduce the risk of further falls and representations to hospital. Currently seeking funding to support this project.

#### **Clinical care in relation to falls**

<sup>β</sup>Claire Burl, <sup>α</sup>Jenneke Foottit, <sup>α</sup>Melanie Jessup

The aim of this study is to determine what clinical care and activities are occurring at the time of a patient fall. It utilises a process of mapping patient and staff location and activity at the time of an inpatient fall, utilising this data in focus groups in which staff consider how practice can be modified to minimise falls. Qualitative interviews with the staff member assigned to care for the patient who fell will deliver insight in to the potential impact of a patient fall. The study is funded by a TPCH Foundation research grant.

# **Publications**

#### **Peer Reviewed Publications**

Conway A, Rolley JX, <sup>a</sup> Fulbrook P, Page K (2014). Issues and challenges associated with nurse-administered procedural sedation and analgesia in the cardiac catheterisation laboratory: a qualitative study. Journal of Clinical Nursing 23(3-4), 374-384.

Conway A, Rolley JX, Page K, <sup>a</sup>Fulbrook P (2014). Clinical practice guidelines for nurse-administered procedural sedation and analgesia in the cardiac catheterization laboratory: a modified Delphi study. Journal of Advanced Nursing 70(5), 1040-1053.

Conway A, Rolley JX, Page K, <sup>a</sup>Fulbrook P (2014). Trends in nurse-administered procedural sedation and analgesia across cardiac catheterisation laboratories in Australia and New Zealand: results of an electronic survey. Australian Critical Care 27(1), 4-10.

Coombs M,  $^{\alpha}$ Fulbrook P, Donovan S, Tester R, DeVries K (in press). Certainty and uncertainty about end of life care nursing practices in New Zealand intensive care units: a mixed methods study. Australian Critical Care.

Edmunds J,  $^{\alpha}$ Fulbrook P,  $^{\alpha}$ Miles S, Watson Genna C (2014). My baby has tongue-tie: what does this mean? Journal of Human Lactation 30(2), 244-245.

<sup>a</sup> Fulbrook P, <sup>a</sup> Lawrence P (in press). Survey of an Australian general emergency department: estimated prevalence of mental health disorders. Journal of Psychiatric and Mental Health Nursing.

<sup>a</sup> Fulbrook P, <sup>a</sup>Lawrence P, Watts K (in press). Validity of the Paddington Alcohol Test in an Australian general emergency department. Alcohol and Alcoholism.

 $^\beta$  Gettens S,  $^\alpha$  Fulbrook P (in press). Fear of falling: association between the Modified Falls Efficacy Scale, in-hospital falls and hospital length of stay. Journal of Evaluation in Clinical Practice..

<sup>β</sup> Hoey LM, <sup>α</sup> Fulbrook P, <sup>β</sup> Douglas JA (2014). Sleep assessment of hospitalised patients: a literature review. International Journal of Nursing Studies 51(9), 1281-1288.



<sup>a</sup> Jessup M, Crilly J, Boyle J, Lind J, Green D, Wallis M, Fitzgerald, G (in press). Users' experiences of an Emergency Department patient admission predictive tool: a qualitative evaluation. Health Informatics Journal.

Langley G, Schmollgruber S, <sup>a</sup>Fulbrook P, Albarran JW, Latour JM (2014). South African critical care nurses' views on end-oflife decision-making and practices. Nursing in Critical Care 19(1), 9-17.

Kearney L, <sup>a</sup>Fulbrook P (2014). The first 18 months: parental choices regarding their infant's health care needs. Neonatal, Paediatric and Child Health Nursing 17(3), 17-22.

<sup>a</sup> Lawrence P, <sup>a</sup> Fulbrook P, <sup>a</sup> Miles S (in press). Nurses' knowledge of pressure injury/pressure ulcer management. Journal of Wound, Ostomy and Continence Nursing.

McGuire AM, Anderson DJ, <sup>a</sup>Fulbrook P (2014). Perceived barriers to healthy lifestyle activities in midlife and older Australian women with type 2 diabetes. Collegian: The Australian Journal of Nursing Practice, Scholarship and Research 21(4), 301-310.

McKellar S, <sup>a</sup> Fulbrook P (2014). Compliance with lipidlowering medication after diagnosis of coronary heart disease. British Journal of Cardiac Nursing 9(5), 244-249.

<sup>a</sup> Peeler A, <sup>a</sup> Fulbrook P, Kildea S (in press). The experiences of parents and nurses of hospitalised infants requiring oxygen therapy for severe bronchiolitis: a phenomenological study. Journal of Child Health Care.

#### Published Abstracts (peer-reviewed)

<sup>a</sup>Fulbrook P (2014). Use of care bundles in critical care. Connect: The World of Critical Care Nursing 9(3), 66.

<sup>a</sup>Hyde S, <sup>a</sup>Miles S, <sup>a</sup>Fulbrook P (2014). Development of a nurseled comfort zone for distressed people in an acute mental health setting: Processes and perspectives of staff and consumers. International Journal of Mental Health Nursing 23, 19.

#### **Journal Articles Under Review or in Preparation**

#### Under review

Brown C, <sup>a</sup>Jessup M, Marshall A. EN2RN: Transitioning to a new scope of practice.

Conway AW, McCarthy AL, <sup>a</sup>Lawrence P, Clark RA. The prevention, detection and management of cancer treatment-induced cardiotoxicity: a meta-review.

Crilly J, Boyle J, <sup>a</sup>Jessup M, Lind J, Green D, Wallis M, Fitzgerald G. The implementation and evaluation of the Patient Admission Prediction Tool (PAPT): assessing its impact on decision making strategies and patient flow outcomes in two Australian hospitals.

 $^\beta$  Davison M,  $^\beta$  Kinnear F,  $^\alpha$  Fulbrook P. Evaluation of a structured simulation exercise to prepare emergency staff for the opening of a new department.

<sup> $\alpha$ </sup>Fulbrook P, <sup> $\beta$ </sup>Anderson A. Pressure injury risk assessment in intensive care: a comparison of interrater reliability and construct validity of the COMHON Index with the Braden, Norton, and Waterlow scales. <sup>a</sup>Jessup M, Douglas T, Branch-Smith C, Priddis P, Shields L. Information needs of parents of children newly diagnosed with cystic fibrosis via newborn screening.

<sup>a</sup>Lawrence P, <sup>a</sup>Fulbrook P. The Kessler Psychological Distress Scales (K10): factor structure in a clinical sample of Australian emergency department patients.

<sup>a</sup>Lawrence P, <sup>a</sup>Fulbrook P. Protocol for a pragmatic randomised controlled trial to evaluate effects of a brief intervention for emergency department attendees who present with mild or moderate levels of non-specific psychological distress.

Williams G, Fulbrook P, Kleinpell R, Schmollgruber S, Alberto L. Critical care nursing organizations and activities: A fourth worldwide review.

#### In preparation

<sup>β</sup> Anderson A, <sup>a</sup>Lawrence P, <sup>a</sup>Fulbrook P. (in preparation). Systematic review of interventions to reduce pressure injury in immobile critically ill patients.

<sup>a</sup> Fitzpatrick E, <sup>a</sup> Miles S, <sup>a</sup> Fulbrook P. The relationship between emergency department length of stay and hospital acquired pressure injuries.

Flowers K, <sup>a</sup>Miles S, <sup>a</sup>Fitzpatrick E. Safety for school children with 'crisis-prone' medical conditions

<sup>a</sup>Foottit J, <sup> $\beta$ </sup>Austin W, <sup>a</sup>Fulbrook P. (in preparation). Use of ECT for severe behaviour concerns in people with late stage dementia.

Hughes P, Towers L,  $^{\beta}$  Yang I, Serginson J,  $^{\alpha}$  Fulbrook P. Community patients with chronic obstructive pulmonary disease requiring long term oxygen therapy: an exploratory descriptive observational study.

<sup>a</sup>Jessup M, Hauser J, Cameron-Tucker H, Cummings E, Turner P, Blizzard L, Walters EH, Reid D. A Health-mentoring system to enhance self-efficacy in people with cystic fibrosis: a pilot study.

<sup>a</sup> Jessup M, Mitchell C, Reinbold J, Pulkkinen. Pain in paediatric patients: what factors influence health professionals' responses?

<sup>a</sup>Lawrence P, <sup>a</sup>Fulbrook P. Screening for mental health in the emergency department: a factor analysis of the DASS21.

<sup>β</sup>Li A, <sup>a</sup> Jessup M, <sup>a</sup> Fulbrook P, <sup>β</sup>Bell S. Passage to parenthood: experiences of adults with cystic fibrosis who have become parents.

<sup>β</sup>Mbuzi V, <sup>α</sup>Fulbrook P, <sup>α</sup>Jessup M, White N. Strategies to improve Indigenous cardiac health: an integrative review.

 $^\beta$ Mbuzi V, "Fulbrook P, "Jessup M, White N. Indigenous patients experiences of acute health care: a metasynthesis of

<sup>β</sup>Podger M, Peters R, <sup>α</sup>Fulbrook P. Heart failure standards for specialist nurses: a delphi study.

<sup>β</sup>Reid D, Marquat L, <sup>a</sup>Jessup M, Cheney J, Cummings E, Turner P, Cameron-Tucker H, Hauser J, Saddington H, Wainwright C. Randomised controlled trial of a mentoring system in older children and adolescents with cystic fibrosis.

<sup>β</sup>Williams D, <sup>α</sup>Miles SJ. A six-year review of skin tear characteristics, prevalence and management in an Australian general hospital.

αNRPDC <sup>β</sup>TPCH

# **Conference Presentations**

#### International

Coombs M, Tester R, Donovan S, <sup>a</sup>Fulbrook P, deVries K (2014). Areas of uncertainty and difference in attitudes about end of life nursing care practices: an international comparison. European Society of Intensive Care Medicine 27th Annual Congress, Barcelona, Spain, 27 September-1 October 2014.

 $^\beta$ Gettens S,  $^\alpha$ Fulbrook P (2014). Fear of falling: association with falls and hospital length of stay (LOS). 6th Australian and New Zealand Falls Prevention Conference. Sydney 16-18 November 2014.

<sup>a</sup>Fulbrook P (2014). Use of care bundles in critical care. World Federation of Critical Care Nurses World Congress. Antalya, Turkey, 12-15 November 2014

<sup>a</sup>Hyde S, <sup>a</sup>Miles SJ, <sup>a</sup>Fulbrook P (2014). Development of a nurse-led comfort zone for distressed people in an acute mental health setting: processes and perspectives of staff and consumers. Australian College of Mental Health Nurses 40th International Mental Health Nursing Conference, 7-9 October, 2014

<sup>a</sup>Jessup M, Douglas T, Branch-Smith C, Priddis P, Shields L (2014). "Feeling my way": Information needs for parents whose infant has been diagnosed with cystic fibrosis following newborn screening. The 3rd Asia-Pacific International Conference on Qualitative Research in Nursing, Midwifery and Health, Newcastle, 1-3 October 2014.

<sup>a</sup>Miles SJ, <sup>a</sup>Fulbrook P (2014). Evidence of benefit of sensorymotor development programs on young children's personal skills, development and learning in school settings. Australian College of Children and Young People's Nurses (ACCYPN) 'Are the Children Well?' International Conference 2014, Cairns, 20-21 October, 2014.

#### National

<sup>α</sup>Fulbrook P, <sup>β</sup>Anderson A (2014). Pressure injury risk assessment in intensive care: a comparison of interrater reliability and validity of the Braden, Norton, and Waterlow scales with the COMHON Scale. Wellbeing Forum: A Focus on Pressure Injuries. Melbourne, 14-15 April 2014. <sup>β</sup>Hoey L, <sup>α</sup>Fulbrook P, <sup>β</sup>Douglas JA (2014). Assessing sleep in hospitalised patients - what tools can nurses use? 26th Annual Scientific Meeting of the Australasian Sleep Association. Perth 9-11 October 2014.

<sup>a</sup>Lawrence P, <sup>a</sup>Fulbrook P, <sup>a</sup>Miles S (2014). A survey of nurses' knowledge of pressure injury management. 10th National Australian Wound Management Association Conference. A gold standard: research and clinical practice. Gold Coast Convention and Exhibition Centre, 7-10 May 2014.

<sup>a</sup>Lord, R, <sup>a</sup>Fulbrook P, <sup>a</sup>Miles SJ, <sup>β</sup>Williams D, <sup>β</sup>Kinnear E (2014). A double blind trial using 0.2% glyceryl trinitrate ointment for healing of chronic venous leg ulcers. Australian Wound Management Association (AWMA) Science of Wound Healing Meeting, 16 August 2014.

<sup>β</sup>Saxon C, <sup>α</sup>Fulbrook P, <sup>β</sup>Fong K (2014) High risk patients' experience during bronchoscopy with sedation and analgesia, Australian Gastroenterology Week 2014, Gold Coast Convention & Exhibition Centre, Gold Coast, Queensland, 22-24 October 2014.

<sup>β</sup>Saxon C (2014). The research journey of a bronchoscopy nurse, GENCA education evening, The Prince Charles Hospital, Brisbane, Queensland, 19 November 2014.

#### Local

<sup>a</sup>Fitzpatrick E (2014). Emergency department length of stay and hospital acquired pressure injury. Redcliffe Hospital Nursing Research Forum, 06 June 2014.

<sup>a</sup>Lawrence P, <sup>a</sup>Fulbrook P (2014). Factor analysis of the K10 in a clinical sample of emergency department attendees. . The Prince Charles Hospital Research Forum. The Prince Charles Hospital, Brisbane. 30-31 October 2014.

Peeler A, <sup>α</sup>Fulbrook P, <sup>β</sup>Kinnear F, Chapman R (2014). Staff experiences of transition to a new paediatric emergency department. The Prince Charles Hospital Research Forum. The Prince Charles Hospital, Brisbane. 30-31 October 2014.



# **Research Grants**

#### Implementation and evaluation of an emergency department 'Navigator' role to improve timely delivery of patient care

<sup>α</sup>Paul Fulbrook, <sup>β</sup>Frances Kinnear, <sup>α</sup>Melanie Jessup Australian Centre for Health Services Innovation. \$74,000

#### Pilot descriptive study: the presence of pressure injury in patients admitted to the emergency department via ambulance

Fulbrook P, Chapman R, McKinnes E, Miles S, Kinnear F. ACU Faculty of Health Sciences, \$13,000

#### Falls knowledge survey

<sup>a</sup>Keith Skelton, <sup>a</sup>Melanie Jessup The Prince Charles Hospital Foundation \$5,000

#### Evaluation of a silicone gel adhesive hydrocellular foam dressings for the prevention of sacral pressure injuries in hospitalised elderly patients

<sup>α</sup>Paul Fulbrook, <sup>β</sup>Damian Williams Smith and Nephew, \$12,141

#### High risk respiratory patients' experiences of bronchoscopy with 'cautious' sedation and analgesia: a qualitative study

Saxon C, Fulbrook P The Prince Charles Hospital Foundation. \$9,940

#### Nursing work in relation to falls: time for change?

<sup>β</sup>Claire Burl, <sup>α</sup>Melanie Jessup The Prince Charles Hospital Foundation \$7,563

# Hospital ethics approvals

HREC/14/QPCH/23: Implementation and evaluation of a emergency department 'Navigator' role

HREC/14/QPCH/49: High risk respiratory patients' experiences of bronchoscopy with 'cautious' sedation

HREC/14/QPCH/211: The context of clinical practice at the time of a patient fall

HREC/14/QPCH/255: Pilot descriptive study: The presence of pressure injury in patients admitted to the emergency department via ambulance

HREC/14/QPCH/256: Pilot study: Evaluation of a silicon gel adhesive hydocellular foam dressing for the prevention of sacral injuries in hospitalised elderly patients



Emergency Department TPCH

#### αNRPDC <sup>β</sup>TPCH

# **Esteem Indicators**

#### **Editorship**

#### Paul Fulbrook

Connect: The World of Critical Care Nursing

#### **Editorial boards**

#### Paul Fulbrook

- Nursing in Critical Care
- · Journal of Multidisciplinary Healthcare

#### Journal referee

#### Paul Fulbrook

- Journal of Clinical Nursing
- Nursing in Critical Care

#### Melanie Jessup

- Health Informatics Journal
- Journal of Cystic Fibrosis
- Journal of Health Organisation and Management

#### Sandra Miles

- Australian Critical Care
- Neonatal, Paediatric and Child Health Nursing Journal
- Roger Lord
- Cytokine

#### **Research indices**

Paul Fulbrook

- 2014 h-Index: 19
- 2014 i10-Index: 30

#### Roger Lord

- 2014 h-Index: 17
- 2014 i10-Index: 25

#### Sandra Miles

• 2014 h-Index: 3

#### Professional roles and affiliations

#### Paul Fulbrook

- Adjunct Professor, School of Health Sciences, University of Tasmania
- National Vice President, Australian College of Critical Care
  Nurses
- Queensland State Representative, Australian College of Critical Care Nurses
- Honorary Ambassador, World Federation of Critical Care
  Nurses
- Honorary Fellow, European Federation of Critical Care
  Nursing Associations

- Member, Research and Research Training Committee, School of Nursing, Midwifery and Paramedicine, ACU
- Member, TPCH Research Council.
- Member, TPCH Hospital Research Ethics Committee
- Member, TPCH Emergency Department Research Group
- Member, TPCH Nursing Advisory Committee

#### Melanie Jessup

- Member, TPCH Falls Injury Prevention Committee
- Member, Statewide Falls Prevention Collaborative Committee
- Member, European Cystic Fibrosis Society
- Member, International Nurse Specialist Group Cystic Fibrosis
- Member, Australian and New Zealand Cystic Fibrosis
  Nurses Group

#### Sandra Miles

- Member, Australian College of Children and Young People's Nurses
- Academic Branch Vice President, National Tertiary Education Union

#### Petra Lawrence

- Member, Drug and Alcohol Nurses Australasia
- Member, Australian College of Nursing
- Member, Drug and Alcohol Nurses Australasia
- Nurse Leader, Honor Society of Nursing, Sigma Theta Tau International
- Member, Australian College of Mental Health Nurses
- Member, Research and Research Training Committee, School of Nursing, Midwifery and Paramedicine, ACU
- · Member, Australian College of Nursing

#### Elyse Fitzpatrick

Member, Australian College of Nursing

#### Roger Lord

- Associate, Royal College of Pathologists of Australasia
- Member, Australian Society of Biochemistry and Molecular Biology
- Member, Australian Wound Management Association
- Member, Institute of Biology (UK)
- Member, Advisory Committee on Biologicals
- Member, ACU Biosafety Committee (Brisbane)
- Member, ACU School of Science, Research and HDR Training Committee

#### Jenneke Foottit

· Member, Australian Association of Gerontology



Nursing Research & Practice Development Centre The Prince Charles Hospital Contact: Petra Lawrence petra.lawrence@health.qld.gov.au Tel: 07 3139 6282/4984 Level 5, Clinical Sciences Building The Prince Charles Hospital, Rode Road, Chermside, Qld 4032, Australia

Published by Australian Catholic University