



**Australian Government**

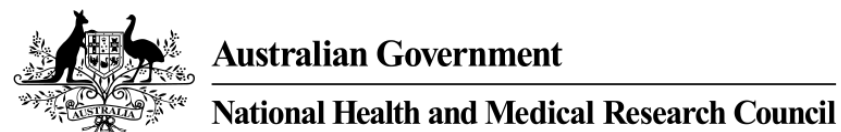
**National Health and Medical Research Council**



# NHMRC Centre of Research Excellence #1029983

## Progress Report

1 January 2015 to 31 December 2015



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## Introduction

The Australian Resuscitation Outcomes Consortium (Aus-ROC) has been established to promote and conduct multi-centre clinical research in the area of pre-hospital cardiopulmonary arrest.

The Consortium is modelled on the highly successful North American (United States and Canada) Resuscitation Outcomes Consortium (ROC).

The consortium has identified a number of strategies to deliver its program of research:

1. To undertake large multi-centre clinical trials of innovative interventions to improve OHCA patient outcomes
2. To establish an Australia-wide OHCA 'epistry' (epidemiologic registry) to monitor and report on the population-based effects of changes in pre-hospital resuscitation policy and practice.
3. To examine system-based strategies to improve the efficiency and effectiveness of pre-hospital emergency care for OHCA in urban and rural environments.
4. To build capacity in pre-hospital emergency care research across Australia through graduate research and post-doctoral training.

The 'Chain of Survival' concept depicted below will provide the framework for the Aus-ROC programme of research; to build the

evidence base across the chain of survival trajectory from: patient collapse; recognition and call for help; time-critical emergency dispatch; immediate life-support strategies and application of therapeutic interventions; patient transport and post-resuscitation care.



The Aus-ROC CRE initially brought together three Australian Universities (Monash University; Flinders University) and three Australian state ambulance services (Ambulance Victoria; SA Ambulance Service; St John Ambulance Service Western Australia) together with international collaborators from the UK and USA. As from July 2013, the Aus-ROC (WA) site will be based at Curtin University, instead of UWA.

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# Director's Report

## Directors Report

### Aus-ROC Annual Report

1 Jan 2015 – 31 Dec 2015

The 2015 calendar year can best be characterised as a period of maturation and expansion of Aus-ROC. There has been further strengthening of collaborative research relationships to include St John New Zealand, Wellington Free Ambulance Service and Queensland Ambulance Service. As can be seen from the list of invited speaker presentations and the number of conference oral and poster presentations by Aus-ROC investigators and students, Aus-ROC has been instrumental in building capacity in resuscitation research.

#### Aus-ROC Staff and students

The four Aus-ROC post-doctoral fellows appointed at the commencement of Aus-ROC in 2012 (Dr Janet Bray and Dr Lahn Straney at Monash University; Dr Cindy Hein at Flinders University; and Dr Madoka Inoue at Curtin University) and Dr Ben Beck (appointed late 2014) have continued to make a positive contribution to the various Aus-ROC projects; and are developing their own track record in resuscitation research, as illustrated elsewhere in the Annual Report.

The five Aus-ROC doctoral students are all progressing well:

- Ms Kylie Dyson (Monash University) has just returned from a study visit with Prof Graham Nichol at the University of Washington in Seattle; and she is writing up her thesis for submission later this year.
- Ms Susie Cartledge (Monash University) is about to commence her implementation trial of teaching CPR to high-risk patients and their relative(s). Susie has also recently been awarded a NHMRC PhD Scholarship for the remainder of her PhD studies.
- Ms Amy Seymour-Walsh (Flinders University), upgraded her Masters by Research to a PhD.
- Ms Milena Talikowska (Curtin University) is in her final year and is currently undertaking the major analytic component of her PhD. She presented her doctoral research in Prague and will be presenting at the Resuscitation in Motion meeting in Toronto in May.
- Ms Nicole McKenzie (Curtin University) commenced her PhD in 2014 and has submitted her first PhD manuscript (a systematic review). Nikki has recently been awarded an APA Scholarship.

Further details about the candidates and their doctoral research can be found in another section of the Report.

Several of the Aus-ROC staff and students have been awarded competitive awards.

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- Dr Ben Beck and Prof Stephen Bernard were both finalists in the European Resuscitation Council (ERC) Congress “Best of the Best” in Prague in October 2015.
  - Dr Janet Bray had a very successful year, having been awarded the following prizes in 2015: The American Heart Association Young Investigator Award and the Bethlehem Griffiths Research Foundation Young Researcher of the Year (Victoria). In addition, a grant application on which Janet was the lead investigator (AIs: Finn J, Straney L and Smith K) was awarded the Heart Foundation “Ross Hohnen Award for Research Excellence for the most outstanding and innovative grant application”.
  - Susie Cartledge (PhD candidate) was the recipient of several prizes, as follows: - Cardiac Society of Australia and New Zealand Conference Allied Health Prize; Australasian Cardiovascular Nursing College Best Research Paper; Australian Resuscitation Council International Spark of Life Conference (runner-up); and “People’s choice award” in the Faculty Round of the “Monash 3-minute thesis” competition.
  - Kylie Dyson (PhD candidate) won the 2015 Paramedics Australasia International Conference - Best Paper Award.
  - Amy Seymour-Walsh (PhD candidate) was a finalist for the 2015 European Resuscitation Congress Young Investigator.

### **Seminars**

On 10 September 2015 Aus-ROC hosted a successful seminar on “Post Resuscitation Care” – with presentations from: Prof Stephen Bernard; A/Prof Peter Morley; Prof Peter Cameron and Dr Dion Stub. Further details about the seminar together with selected presentations – can be found on the Aus-ROC website at: <https://www.ausroc.org.au/training-and-education/seminars/>

### **Research studies**

In 2015 we were informed that our Aus-ROC multi-centre RCT of targeted oxygen therapy post-ROSC had been successful for NHMRC Project Grant funding, as follows:

- 2016-2020 NHMRC Project Grant (\$1,891,021) “Reduction of oxygen after cardiac arrest: The EXACT trial”: Bernard S, Smith K, Cameron P, Finn J, Grantham H, Bray JE, Stub D, Rogers I, Perkins G.

Several other NHMRC project grant applications were submitted by Aus-ROC investigators in the NHMRC 2015 round, but unfortunately were not successful.

### ***Other competitive grant successes:***

- 2016 National Heart Foundation Vanguard Grant (CIA \$83,552). Developing a community-based cardiopulmonary resuscitation (CPR) education program by understanding low bystander CPR rates. Bray JE, Straney L, Smith K, Finn J.

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- 2016 National Stroke Foundation Small Project Grant (CIA \$19,200). The impact of the FAST stroke awareness campaigns on emergency health care utilisation. Bray JE, Smith K, Bladin C, Finn J.
  - 2016 Nurses Board of Victoria Legacy Limited (CIA \$50,000). Post-resuscitation care in Victoria: understanding current practice to improve outcomes for out of hospital cardiac arrest patients. Bray JE, Smith K, Bernard S, Stub D, Finn J.

#### *RINSE*

The results of 'RINSE' were presented by Prof Bernard at the ERC meeting in Prague in October 2015. A manuscript has been prepared and is currently under review.

#### *EPISTRY*

Since the inception of Aus-ROC our vision has been to develop an Australian and New Zealand OHCA registry (which we call an 'epistry' to be consistent with the North American Resuscitation Outcomes Consortium terminology). The appointment of Dr Ben Beck as the Aus-ROC Epistry Coordinator in early 2015 helped to bring this vision to fruition. The Aus-ROC Epistry overview paper is now online at BMJ Open:

<http://bmjopen.bmj.com/content/6/4/e011027.full.pdf+html>

One year of data (2014) has been received from the following ambulance services: Ambulance Victoria; SA Ambulance Service, St John Ambulance WA, Queensland Ambulance Service, St John New Zealand and Wellington Free Ambulance Service. This initial data transfer has enabled processes to be refined. A survey of definitions and cardiac arrest management practices used by each ambulance service has been completed and a manuscript is in preparation.

#### *Other Aus-ROC projects*

Over the last 12 months, there have been a number of other projects undertaken by Aus-ROC staff and students, as reflected by the publication list reported elsewhere in this report.

#### **Future Directions**

Aus-ROC is now in the final year of a five-year funded NHMRC Centre of Research Excellence (CRE) grant. As such, it is important for us to now consider the future. Firstly, there is no reason why the 'Aus-ROC' entity cannot continue. The Australian and New Zealand collaborations between investigators are now well established. We recognise that multi-centre OHCA clinical trials require significant funding – which will require application to NHMRC and other funding bodies (as we have done for EXACT). However, past experience tells us that NHMRC funding for the ongoing

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management of the Epistry is unlikely and hence we need to look at alternative sources of (commercial) funding for the Aus-ROC Epistry Database Manager position.

Fortunately most of the senior Aus-ROC investigators have alternative sources of salary support. However ongoing funding for the research fellows and PhD students (on completion of PhDs) is more challenging – and several have already sought part-time appointments with other projects.

A new NHMRC Centre of Research Excellence in Prehospital Care is currently under review, which if successful, will continue to build capacity in prehospital research more generally.

### **Summary**

The Australian Resuscitation Outcomes Consortium (Aus-ROC) has matured as a collaborative research entity; with national and international identity.

Thanks to the commitment, enthusiasm and collaborative spirit of all members of the team, I would assert that Aus-ROC has been successful in achieving those aims that were identified in the NHMRC application, namely:

- To undertake large multi-centre clinical trials
- To establish an Australia-wide OHCA 'epistry' (epidemiologic registry) to monitor and report on the population-based effects of changes in pre-hospital resuscitation policy and practice.
- To examine system-based strategies to improve the efficiency and effectiveness of pre-hospital emergency care for OHCA in urban and rural environments.
- To build capacity in pre-hospital emergency care research across Australia through graduate research and post-doctoral training.

In our final year of NHMRC funding, the challenge is to ensure that the collaborative initiatives in resuscitation research that Aus-ROC enabled continue to flourish.

**Professor Judith Finn**

**Aus-ROC Director**

28 April 2016



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## Chief Investigators

### Professor Peter Cameron

MBBS, MD, FACEM

Peter Cameron is an international expert in emergency medicine and emergency systems. He is Immediate Past President of the International Federation for Emergency Medicine, a Past President of the Australasian College for Emergency Medicine (ACEM), and has substantial expertise in the development of emergency medical systems in Victoria and internationally. Professor Cameron is Academic Director of the Emergency and Trauma Centre and National Trauma Research Institute (NTRI) at The Alfred and Chair of the Monash/Alfred Injury Network (MAIN). He has recently completed a term as the Chairman of Emergency Medicine for the Hamad Medical Corporation in Doha, Qatar and has returned as the Academic Director of The Alfred Emergency and Trauma Centre.

He is currently a Chief Investigator on a number of NHMRC grants, including the Centre for Research Excellence in Australian Resuscitation Outcomes Consortium (Aus-ROC) and a number of partnership and project grants involving injury and trauma research. He is also a Chief Investigator on a number of leading clinical quality registries including the Victorian State Trauma Registry, the Victorian Orthopaedic Trauma Registry, the Victorian Cardiac Arrest Registry, the Massive Transfusion Registry, the Burns Registry of Australia and New Zealand and the Aus-ROC Epistry.

He is Head of the Health Services Research Division and Acting Head of the Critical Care Research Division in the Department of Epidemiology and Preventive Medicine at Monash University, and Co-Director of the National Trauma Research Institute. He has attracted over 20 million dollars in competitive grants and has over 400 peer reviewed publications



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## **Professor Stephen Bernard**

MBBS, MD, FACEM, FCICM, FCCM, ASM

Prof Bernard is a Senior Intensive Care Physician at the Alfred Hospital, Director of Intensive Care at Knox Private Hospital, and Senior Medical Advisor to Ambulance Victoria. His MD thesis (2003) was on therapeutic hypothermia in the treatment of patients with severe neurologic injury. He has over 20 years of research experience in the design and conduct of pre-hospital randomised clinical trials. His research interests are in the areas of therapeutic hypothermia after cardiac arrest and interventions after severe traumatic brain injury.

Prof Bernard has conducted large, multi-centre randomised trials on the treatment of patients with anoxic brain injury after out-of-hospital cardiac arrest with therapeutic hypothermia. The first published in the NEJM was instrumental in the development of the current international recommendations for targeted temperature management in patients with neurological injury after out-of-hospital cardiac arrest. Other trials published in Circulation and Critical Care Medicine examined the timing of therapeutic hypothermia after cardiac arrest. Prof Bernard is currently leading a recently completed randomised trial that examines the role of therapeutic hypothermia during cardiac arrest.

Prof Bernard has published over 100 peer review papers and written 20 book chapters, mainly relating to treatment of neurological injury. He has been invited to present at many international meetings including: the Society of Critical Care Medicine (2005, 2007, 2008); ANZCA (2005, 2013, 2015): International Symposium on Preserving the Brain in Neurological Emergencies (2006) and Therapeutic Temperature Management Symposium (Rome, 2007); and SMACC (2014).

In 2005 he won the prestigious Asmund S. Laerdal Prize for Resuscitation Research awarded by the Society of Critical Care Medicine for excellence in research into cardiac arrest. Prof Bernard was co-chair of the organising committee of the Society of Critical Care Medicine Annual Scientific Meeting held in Honolulu (2008) and received a Presidential Citation award (2009) from the Society of Critical Care Medicine. Prof Bernard also has extensive research experience in clinical trials of interventions in patients with severe traumatic brain injury, including a trial of hypertonic saline (JAMA 2004), paramedic rapid sequence intubation (Annals of Surgery 2010) and is currently CI-B in a trial of therapeutic hypothermia after severe traumatic brain injury and CI-A in a trial of the use of tranexamic acid in severe trauma. He was awarded the Ambulance Service Medal in 2015 for his services to Ambulance Victoria over the last 22 years.



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## **Professor Judith Finn**

PhD, MEdStud, GradDipPH, BSc, DipAppSc(Nsg) DipAppSc(Nsg) RN RM, ICCert, FCNA, FAHA

Prof Judith Finn is currently employed in the School of Nursing, Midwifery and Paramedicine at Curtin University (Perth) as a lead researcher within the Prehospital, Resuscitation and Emergency Care Research Unit (PRECRU) and Adjunct Research Professor with St John Ambulance Western Australia. She also holds a seconded part-time appointment in the School of Public Health and Preventive Medicine at Monash University (Melbourne) as Professor and Director of the Australian Resuscitation Outcomes Consortium (Aus-ROC) – a NHMRC Centre for Research Excellence.

Judith has successfully brought together her clinical experience as a critical care registered nurse and epidemiologic research expertise to apply a population-based focus to clinical research questions, involving both observational studies and clinical trials. Her doctoral research was the first population-based study to make use of the St John Ambulance (WA) clinical data, linked to the WA hospital morbidity and death data. Prof Finn's internationally recognised expertise in resuscitation research and practice is reflected in her prestigious appointment as Co-Chair of the International Liaison Committee on Resuscitation (ILCOR) Education, Implementation and Teams (EIT) Task Force, one of six task forces that coordinate the international review of research science – and development of consensus statements and treatment recommendations that underpin resuscitation guidelines worldwide.

In the decade since her PhD completion, Judith has been successful in attracting funding for a number of competitive national (and international) research grants (NH&MRC, NHFA, Laerdal Foundation, BUPA Foundation). Her competitively funded research includes: randomised controlled clinical trials (e.g. the efficacy of adrenaline in cardiac arrest, the 'RINSE' study), longitudinal studies utilising linkage to statewide health data (e.g. prognostic determinants of cardiac arrest and population monitoring of coronary heart disease), national surveys (e.g. resuscitation policy & practice in Australian Hospitals) & clinical audits. Professor Finn's current research focus is prehospital clinical practice and models of care; and in particular, strategies to improve outcomes for cardiac arrest patients.



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## **Associate Professor Karen Smith**

PhD

Associate Professor Karen Smith is the Manager of Research and Evaluation at Ambulance Victoria where she has built up an active research program, which covers all aspects of pre-hospital care. Karen is also an adjunct Associate Professor at the University of Western Australia (Emergency Medicine) and an adjunct Senior Research Fellow with the Department of Epidemiology and Preventive Medicine, Monash University. Her Research and Evaluation Department at Ambulance Victoria was awarded the AV Inaugural CEO Award for Leadership Excellence in 2012.

Karen co-founded and is the Principal Investigator on the Victorian Ambulance Cardiac Arrest Registry (VACAR) which contains information dating back to 1999 for all patients in Victoria who suffer cardiac arrest and receive ambulance care (n>70,000 patients). Karen also co-founded the Victorian State Trauma Registry (VSTR) at Monash University and is a current member of the VSTR Steering Committee. A/Prof Smith is a chief investigator on key pre-hospital clinical trials, such as the RINSE (induced hypothermia during resuscitation of cardiac arrest patients) and AVOID trials (air versus oxygen in myocardial infarct patients). She is also actively involved in health services research, quality assurance research and the development of pre-hospital clinical indicators. Karen is co-author for one book chapter and over 65 peer-review publications in national and international journals. Over the past ten years, she has been involved in winning competitive grants and tenders totalling over \$7 million. A/Prof Smith is also actively involved in student education and is currently co-supervising multiple post graduate students (PhD, masters and honours) enrolled across numerous universities.



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## **Clinical Professor Peter Thompson**

**MBBS, MBA**

Professor Peter Thompson is Consultant Cardiologist and Director of Research at Sir Charles Gairdner Hospital, Perth, Clinical Professor of Medicine and Population Health, University of Western Australia, Deputy Director of the West Australian Institute of Medical Research and Deputy Director of the West Australian Heart Research Institute. He has published extensively in peer-reviewed journals. Professor Thompson is skilled in project management and team management, assisted by his completion of MBA qualifications in 2000. In addition to an active involvement in clinical cardiovascular research, he maintains a private cardiology practice with daily involvement in the management of patients with acute coronary syndromes. He is the editor of the Coronary Care Manual, which in its 1st edition became a standard textbook of Coronary Care (Elsevier) and has recently been published in 2nd Edition (Elsevier Thompson PL ed 2010, 94 chapters, 35 authored by Thompson).

From 2005 to 2009, he was an NHMRC Practitioner Fellow, and is currently a Chief Investigator on NHMRC grants for follow-up of Aboriginal cardiovascular events, identification of the prevalence of atherosclerotic disease in Western Australia, the 16 year follow-up of the predictive value of biomarkers in patients in the LIPID trial and most recently the use of genomic markers for predicting risk. He has actively participated in the design, conduct and analysis of clinical trials for 25 years and has extensive experience on the management committees of significant clinical trials. He leads a busy Clinical trials Group in the Western Australian Heart Research Institute, currently responsible as Principal Investigator for 8 trials.

His publications on genomic aspects of atherosclerosis have been widely cited (eg Circulation. 1999;99:2383-2388, 172 publications) and he is currently the Chief Investigator (CIA) on a NHMRC funded genome wide study of the LIPID cohort. He has extensive experience with the design and management of large community studies, and has collaborated with the cardiovascular epidemiology group in the UWA School of Population Health over 25 years in monitoring trends in CHD, treatment and procedures using the WA linked data bases. He was joint co-ordinator of the Perth MONICA Centre and continues the follow up of the large cohort from the original study which has recently reported its long term follow-up, showing benefit of evidence based medical treatments (BMJ. 2009 Jan 26;338:b36). He has had extensive involvement over 30 years in the National Heart Foundation, and his research has been the basis for national education campaigns on the need for early action on heart attack.



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## **Professor Andrew Tonkin**

**MBBS, MD, MRACP, FRACP**

Professor Tonkin's major research achievements include seminal large-scale randomised controlled clinical trials. Among the most significant are the LIPID study, one of the largest clinical trials undertaken in Australia; The Home Automatic defibrillator Trial (HAT), funded by the US NIH; and the AsPirin in Reducing Events in the Elderly (ASPREE) study also funded by the US NIH in addition to the NHMRC. Both the LIPID study and HAT results were published in the NEJM. Other ongoing large NHMRC-funded RCTs on which Prof Tonkin is a CI are STaREE, a controlled trial of statins, and AusPICE, which will test the role of pneumococcal vaccination in preventing major CVD events. Among other recent research initiatives, Prof Tonkin has also been senior investigator on an ARC grant which applied spatial geography (GIS) to quantify access to relevant services after an acute event in 20,000 population centres throughout Australia. The resulting article was judged one of the most significant published in *Circulation* in 2014.

In 2011 Prof Tonkin was awarded an Order of Australia Medal for services to medical research. In addition, he has received the highest research award of the Cardiac Society of Australia and New Zealand, the RT Hall Prize, twice; both the Sir John Lowenthal Award and also the Research Medal for lifetime contributions to cardiovascular research from the Heart Foundation; and was one of five population health researchers featured in the 2009 NHMRC publication 'Australian Research that's Changing the World'. He has been invited to present at major international meetings over the last 25 years, including the American Heart Association, American College of Cardiology, European Society of Cardiology and World Congress of Cardiology. In addition to other editorial board appointments, he has been the Australia and New Zealand International Associate Editor for *Circulation*, an elected councillor of the Cardiac Society of Australia and New Zealand, and a member of the Executive Board of the World Heart Federation. Prof Tonkin's has also held roles as the first Director of Cardiology at Flinders Medical Centre, Adelaide (1978-1988) and the Austin and Repatriation Medical Centre, Melbourne (1988-1997) and with the National Heart Foundation (1997-2006), for which he was twice acting CEO.

Prof Tonkin's work has had a significant impact on healthcare practice and policy. The major LIPID publication in the *New England Journal of Medicine* has over 4000 citations and had a major impact on eligibility for criteria for subsidy of statins under the Australian PBS, and on Australian and international guidelines for CVD prevention. In addition, Prof Tonkin was the inaugural chairman of the National Cardiovascular Health Strategies Group reporting to various jurisdictions of government, and ongoing since 1996 he has been chair of the Steering Committee for the National System for Monitoring Cardiovascular Diseases, based at the Australian Institute of Health and Welfare. He has also had a major influence on community awareness of cardiovascular health through his role as Director of Health, Medical and Scientific Affairs of the National Heart Foundation of Australia from 1997-2006, and prior to this and subsequently as an honorary of the Heart Foundation. In 2007 he was awarded the National Media Award of Research Australia.



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## Associate Investigators

### Professor Hugh Grantham

ASM, MBBS, FRACGP

Professor of Paramedics, Flinders University

Assistant Dean Student Affairs School of Medicine

Senior Medical Practitioner, South Australian Ambulance Service



### Associate Professor Tony Walker, ASM

BParamedStud, GradCertAppMgt, GradDipEmergHth(MICA), MEd, FPA AFAIM

General Manager Regional Services, Ambulance Victoria

Adjunct Associate Professor, College of Health and Biomedicine, Victoria University



### Associate Professor Peter Morley

MBBS FRACP FANZCA FCICM FERC

Senior Specialist Intensive Care, Director of Medical Education, Royal Melbourne Hospital

Director of Medical Education, RMH Clinical School, The University of Melbourne



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## **Senior Research Fellow Teresa Williams**

RN, ICU Cert, BN, MHLth Sci (Res), PG Dip Clin Epi, PhD

Senior Research Fellow

Prehospital Resuscitation and Emergency Care Research Unit (PRECRU), School of Nursing, Midwifery and Paramedicine

Curtin University, Western Australia



## **Professor Andrew Forbes**

BSc(Hons), MSc, PhD

Head Biostatistics Unit

School of Public Health and Preventive Medicine, Monash University



## **Winthrop Professor Antonio (Tony) Celenza**

MBBS, MClinEd, FACEM, FCEM

Head, Discipline of Emergency Medicine, University of Western Australia

Director, MBBS/MD Course, University of Western Australia

Specialist Emergency Physician, Sir Charles Gairdner Hospital





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## **Professor Gavin Perkins**

MB ChB, MMed, MD, FRCP, FFICM, FERC

Clinical Professor in Critical Care Medicine Warwick Clinical Trials Unit

Honorary Consultant, Physician at the Heart of England NHS Foundation Trust

Director of Research Intensive Care Society

Clinical research lead (division 6) and Critical Care Clinical Research Speciality lead, West Midlands Comprehensive Research Network

Chairman Resuscitation Council (UK) ALS Subcommittee

Co-Chair BLS / AED Task Force European Resuscitation Council

Co-chair International Liaison Committee for Resuscitation



## **Professor Graham Nichol**

MD, MPH, FRCP(C)

Leonard A Cobb Medic One Foundation Endowed Chair in Prehospital Emergency Care

Director, University of Washington-Harborview Center for Prehospital Emergency Care

Professor of Medicine, University of Washington,

Seattle, WA



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## Research Fellows

### Dr Janet Bray

PhD, GDip Sci(AppStats), GradCert (ClinTrials), PGDip AdvNurs(Critical Care), GDip AppSci(Nurs)

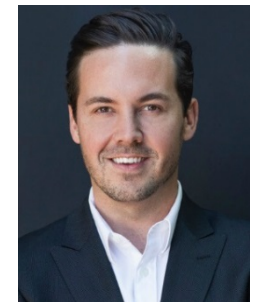
Dr Janet Bray is Associate Director of the Australian Resuscitation Outcomes Consortium (Aus-ROC) within the Department of Epidemiology & Preventive Medicine (Critical Care Division) and a NHMRC/NHF Early Career Fellow. Janet is Chair of the Aus-ROC Australian and New Zealand Out-of-hospital Cardiac Arrest (OHCA) Epistry. Her background in cardiac and intensive care nursing has driven her research career to improve outcomes for critically ill cardiovascular patients -particularly in the hyper-acute phase. Areas of published scholarship include: epidemiological and interventional studies in out-of-hospital cardiac arrest, recognition and response to cardiovascular events (stroke, heart attacks and cardiac arrest), and the pre-hospital and emergency care of stroke patients.



### Dr Lahn Straney

BBI, Grad Cert Stats, PhD

Dr Lahn Straney is a Research Fellow with the Australian Resuscitation Outcomes Consortium (Aus-ROC) within the Department of Epidemiology & Preventive Medicine (Critical Care Division). Lahn has a BSc in Biotechnology from the Queensland University of Technology, a PhD in Epidemiology and Biostatistics from the University of Queensland, a Graduate Certificate in Science, Statistics from the University of Queensland. As a graduate student, Lahn researched methods for evaluating the performance of paediatric intensive care units in Australia and New Zealand. He discovered that the length of stay in intensive care was affected by factors other than inherent differences among patients, and that administrative differences may affect unit efficiency. Lahn was a Senior Research Fellow at the Institute for Health Metrics and Evaluation at the University of Washington from 2010 to 2012.



### Dr Ben Beck

PhD

Dr Ben Beck is a Research Fellow with the Australian Resuscitation Outcomes Consortium (Aus-ROC) within the Department of Epidemiology & Preventive Medicine. Ben is the coordinator of the Aus-ROC Australian and New Zealand Out-of-hospital Cardiac Arrest (OHCA) Epistry and also has a keen interest in traumatic OHCA.



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## **Dr Cindy Hein**

PhD, BHSc, DipAppSc, FPA

Dr Cindy Hein is currently employed as an Extended Care Paramedic at SA Ambulance Service (SAAS) in Adelaide South Australia (SA) and as a post-doctoral research fellow with the Aus-ROC CRE working from Flinders University SA. Cindy completed her PhD at Flinders University in 2009 and was the Manager of Clinical Governance at SAAS before returning to a clinical & research role. Cindy has a commitment to improving cardiac arrest outcomes by facilitating research within the paramedic field. Cindy is a member of the SA branch of the Australian Resuscitation Council, Fellow of Paramedics Australasia (PA), scientific reviewer of PA conferences and member of SAAS's research committee.



## **Dr Madoka Inoue**

PhD, BHsc, RN, PHN

Dr Inoue is the Aus-ROC postdoctoral fellow in PRECRU, funded jointly by St John Ambulance (WA) and Aus-ROC. Madoka is a registered nurse in Japan and Australia and worked in the Emergency Department in Japan. She successfully completed her PhD at Curtin University (Public Health) in 2012 and has joined the Aus-Roc since July 2013. Her current research focuses on the epidemiology of out-of-hospital cardiac arrest in WA. She also oversees the management of the St John Ambulance (WA) Cardiac Arrest database.



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## PhD students

### Ms Kylie Dyson

BHsc (Hons)

Kylie Dyson commenced her PhD in October 2012 upon receiving a scholarship from the Australian Resuscitation Outcomes Consortium (Aus-ROC). In 2014 Kylie was awarded a National Health and Medical Research Council (NHMRC) Public Health Postgraduate Research Scholarship (ID: 1075456). Kylie's thesis will focus on exploring the level of paramedic experience and exposure to out-of-hospital cardiac arrest and resuscitation interventions and how this influences performance and survival. Kylie has worked for Ambulance Victoria in Melbourne as a Qualified Ambulance Paramedic, Clinical Instructor and Paramedic Educator and will continue to work as paramedic part-time during her candidature.

*PhD supervisors: Prof J Finn, Dr J Bray, A/Prof K Smith, Dr Lahn Straney and Prof S Bernard*



### Ms Susan Cartledge

BN (Hons)

Susie Cartledge received a PhD scholarship from the Australian Resuscitation Outcomes Consortium (Aus-ROC) in January 2014. She was then awarded a Post Graduate Scholarship from the National Health and Medical Research Council (NHMRC) in January 2016. Susie will investigate a targeted approach to Basic Life Support training, specifically investigating training family members of high-risk cardiac patients. Susie has a background in cardiac and emergency nursing and has used this experience to conduct community first aid training courses. Susie will continue to conduct first aid courses and work clinically on the cardiac unit of The Alfred Hospital during her candidature.

*PhD supervisors: Prof J Finn, Dr J Bray, Dr Dion Stub and Prof H Krum*



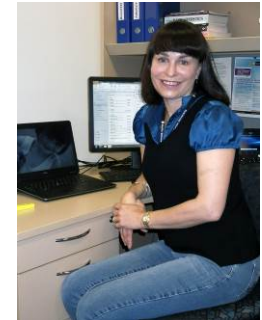
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## Ms Nicole McKenzie

MPH, PG Dip (Critical Care), B Nurs, RN

Nicole McKenzie is a Research Nurse in the Prehospital, Resuscitation and Emergency Care Research Unit (PRECRU) in the School of Nursing & Midwifery in the Faculty of Health Sciences at Curtin University. Nicole was awarded a post graduate qualification in critical care nursing in 2000 and completed a Master of Public Health in 2009. She has a background in critical care nursing in Australia and the Middle East and has had the privilege of participating in humanitarian work in East Africa. Nicole started work at Curtin University in 2010 as a research nurse collecting data in an ICU follow up study. Nicole is now involved in a follow up study of patients who survived to hospital admission after an out-of-hospital cardiac arrest. Nicole's PhD aims to describe in-hospital post-resuscitation management of OHCA and to identify in-hospital prognostic determinants of OHCA patients in Perth, WA.

*PhD supervisors: Professor Judith Finn, A/Prof Kwok Ho and Dr Teresa Williams*



## Ms Milena Talikowska

BSc BE (Hons) MPhil

Milena Talikowska thesis examines the relationship between the quality of cardiopulmonary resuscitation performed by paramedics and survival outcomes from out-of-hospital cardiac arrest (OHCA). She is exploring this within the context of the Perth metropolitan area using data obtained from the St John Ambulance WA (SJA-WA) OHCA database. CPR quality data is being collected using the Philips HeartStart MRx Monitor/Defibrillator with Q-CPRTM measurement/feedback tool.

*PhD supervisors: Professor J Finn, Dr H Tohira and Dr P Bailey*



## Ms Amy Seymour-Walsh

BSc (Paramedic), GCert (Intercultural Studies), GDip (Divinity)

Amy Seymour-Walsh's PhD research seeks to compare the cost-effectiveness of resuscitation skills when taught with two different methods: the four-stage approach commonly advocated for use in ALS, PALS and other courses, and a more traditional see-one, do-one approach. The research contains a series of five studies which aims to help educators understand how to teach resuscitation skills effectively which will improve resuscitation outcomes, and efficiently with respect to time and resources.

*Supervisors: Prof Hugh Grantham, Prof Paul Worley, and Associate Professor Anna Vnuk*



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## Consumer representatives

### Mr Jeff Waters

Jeff Waters is a Melbourne-based journalist and media consultant. He has held various senior positions within the media - most recently as Senior Correspondent in Victoria for ABC News. Jeff suffered an out-of hospital cardiac arrest collapsing in front of his wife, who is a GP, and was lucky enough to enjoy perfect CPR until the ambulance arrived. Eventually two ambulance teams and two response groups from the local fire station - in Victoria, firefighters are also first responders to out-of-hospital cardiac arrests - battled for 56 minutes before they got a heartbeat. When they got Jeff to hospital his heart stopped several times more. He eventually pulled through and was released from hospital in a little more than a week. Then, a week after he was released he had another, smaller heart attack and went back to hospital with good reason. Jeff does voluntary work for the Heart Foundation and the Men's Shed Movement, underlining the need for recognition of the outcomes, including depression and anxiety, following cardiac arrest.



### Mr Brian Stafford

Brian is a health consumer representative. He is a health consumer with a lived experience of iatrogenic harm. He says we are all health consumers, however, there is a difference; not all of us have experienced harm through medical care. Nor do all who experience such harm choose to actively engage in change to build bridges of respect and understanding.

He believes he encountered clinicians that appeared to have self-imposed restrictions not to move past out-dated and known to have failed treatment options. To address that medical denial he engaged in his own research of new medical treatments. He then presented to the physician involved the latest, and peer reviewed medical options to treat their family member. He stresses these were not his medical innovations. In 2013 he spoke at the Swiss conference 'Communicating Medical Error'. He has been a member of MSAC's and is a WHO Patient for Patient Safety Champion. He is a member of the Australian Association of Bioethics & Health Law. He sits with SCGH Human Research Ethics Committee; and St John Ambulance.



## Aus-ROC Endorsed Studies

Only studies or activities that have been formally endorsed, through the process described in the Aus-ROC Governance Document are to be referred to as an “Aus-ROC endorsed study or activity”.

The purpose of Aus-ROC endorsement is not only to ensure a consistent high standard of study design, conduct, analysis and dissemination but also to ensure that research capacity and study feasibility is optimised.

The Aus-ROC Steering Committee may need to determine the relative priority of two or more studies competing for the same target population and in such cases will follow the principles outlined in the Aus-ROC Competing Studies Policy.





## ***The RINSE study –completed in 2015***

Funding: NHMRC Project grant: 2011-2014; \$677,888

Contact Investigator: Professor Steve Bernard

The Rapid Infusion of Cold Normal Saline (RINSE) study is a randomised controlled trial, funded by NHMRC, to determine whether paramedic initiated cooling during CPR (using a rapid intravenous infusion of ice-cold normal saline) improves patient survival outcomes compared with usual practice (i.e. no prehospital cooling) in patients who are being resuscitated from out-of-hospital cardiac arrest. The RINSE trial is conducted by the ambulance services of Victoria, Western Australia and South Australia.

Aims: The RINSE RCT aims to demonstrate that paramedic core cooling during CPR, using a rapid infusion of ice-cold (4°C) normal saline, improves outcome at hospital discharge compared with standard care in patients with out-of-hospital cardiac arrest.

Progress: The trial was closed early (at 48% recruitment target) due to changes in temperature management at major receiving hospitals. A total of 1198 patients were assigned to either therapeutic hypothermia during CPR (618 patients) or standard pre-hospital care (580 patients). Full results are currently undergoing peer-review for publication and will be available on the Aus-ROC website once published.

**Clinical Trial Registration Information**—[www.Clinicaltrials.gov](http://www.Clinicaltrials.gov). Identifier: NCT01173393.



## ***Reduction of oxygen after cardiac arrest: The EXACT trial***

Funding: 2016-2020 NHMRC Project grant funding 2016-2020 \$1,891,020

Contact Investigator: Professor Steve Bernard

Currently, patients who are successfully resuscitated after an out-of-hospital cardiac arrest routinely receive 100% oxygen by paramedics during ambulance transport to hospital. This high dose of oxygen usually continues after arrival at hospital until the patient is admitted into the intensive care unit, which can take 2-6 hours. The administration of 100% oxygen for the first hours after resuscitation is not based not on any supportive clinical data, but on the idea that a higher dose of oxygen would benefit organs and tissues that have been deprived of oxygen during the cardiac arrest. However, there is now compelling experimental data and supportive observational human studies indicating that excessive oxygen during the early post-arrest period may lead to additional neurological injury and worse clinical outcomes compared with oxygen titrated to normal levels.

We aim to conduct a Phase 3 multi-centre, randomised, controlled trial to determine whether reducing oxygen administration to target a normal level as soon as possible following successful resuscitation from out-of-hospital cardiac arrest, compared to current practice of maintaining 100% oxygen, improves patient survival at hospital discharge.

Pilot study underway in Victoria and South Australia. Main study to commence in 2016.

## ***The RECOVER (ENDEAVOUR) study***

Contact Investigator: Associate Professor Karen Smith

The Explaining Differences in Adult out-of-hospital cardiac arrest survival in Victorian metropolitan, rural, and urban Regions (ENDEAVOUR) study is an observational study that aims to explain differences seen in out-of-hospital cardiac arrest (OHCA) survival between metropolitan, urban and rural Victoria. Routinely collected VACAR data will be supplemented by geospatial data (such as location of arrest) to allow the investigation of factors associated with the higher survival rates in the metropolitan area.

This study concluded in 2015. Publications are featured under Aus-ROC publications (See Straney et al).

## Aus-ROC Epistry

Dr Janet Bray (Chair)

Dr Ben Beck (Coordinator)

In addition to the conduct of clinical trials (such as RINSE) the other major strategic research initiative for Aus-ROC is the development of the Aus-ROC Australian and New Zealand OHCA Epistry – an epidemiologic registry of all OHCA attended by ambulance paramedics. The specific aims of the Aus-ROC Epistry are to:

1. Establish a comprehensive ongoing data infrastructure to facilitate the design, implementation and interpretation of Aus-ROC trials.
2. Define the incidence and outcome of out-of-hospital cardiac arrest, including quality of life after hospital discharge.
3. Describe the relationships between resuscitation performance and EMS structure, adjusting for episode-specific factors.
4. Evaluate the relationships between outcome and patient, ambulance service, regional, and periodic factors.

The Epistry is overseen by the Epistry Management Committee, which has members from Aus-ROC and each participating Ambulance Service. In 2015, the Epistry made great progress:

1. Six ambulance services (four in Australia and two in New Zealand) currently participate and contribute data to the Epistry: Ambulance Victoria, SA Ambulance Service, St John Ambulance Western Australia, Queensland Ambulance Service, St John Ambulance New Zealand and Wellington Free Ambulance. Approximately 19.3 million persons are served by these ambulance services; thus, the Epistry represents approximately 63% of the Australian population and 100% of the New Zealand population.
2. The Epistry Management Committee finalised a list of mandatory variables to be included in the Epistry that are collected by all participating ambulance services. These variables, along with details on the development of the Epistry, have been outlined in a manuscript published in the journal *BMJ Open*.
3. Each of the participating ambulance services have also completed a survey outlining their workforce characteristics, dispatch system, resuscitation practices and existing cardiac arrest registries; the manuscript detailing these findings is currently under review.

Finally, we have received data for the 2014 calendar year from each ambulance service and will shortly be requesting data from the 2015 calendar year. We hope to have the first results from the Aus-ROC Epistry published in the next 12 months.

## Publications (Aus-ROC specific)

- Bray JE, Stub D, Ngu P, Cartledge S, Straney L, Stewart M, Keech W, Shaw J, and Finn J. Mass media campaigns influence on prehospital behaviour for acute coronary syndromes: an evaluation of the Australian Heart Foundation's Warning Signs Campaign. *JAHA* 2015;4:1-9.
- Dennekamp M, Straney L, Erbas B, Abramson MJ, Keywood M, Smith K, et al. Forest Fire Smoke Exposures and Out-of-Hospital Cardiac Arrests in Melbourne, Australia: A Case-Crossover Study. *Environmental Health Perspectives*. 2015;123(10): 59-964
- Dyson K, Bray J, Smith K, Bernard S, Straney L, Finn J. Paramedic exposure to out-of-hospital cardiac arrest is rare and declining in Victoria, Australia. *Resuscitation*. 2015;89:93-98.
- Straney L, Bray J, Beck B, Finn J, Bernard S, Dyson K, Lijovic M, Smith K. Regions of High Out-of-Hospital Cardiac Arrest Incidence and Low Bystander CPR rates in Victoria, Australia. *PloS one*. 2015;10(10), e0139776.
- Straney L, Schlapbach L, Yong G, Bray J, Millar J, Slater A, Alexander J, Finn J. Trends in Pediatric Intensive Care Unit admission and survival rates in children in Australia and New Zealand following cardiac arrest. *Pediatric Critical Care Medicine*. 2015;16(7):613-620
- Straney L, Bray JE, Beck B, Finn J, Bernard S, Dyson K, Lijovic M, Smith K. Regions of High Out-of-Hospital Cardiac Arrest Incidence and Low Bystander CPR rates in Victoria, Australia. *Plos One* 2015;10; e0139776.
- Talikowska M, Tohira H, Finn J. Cardiopulmonary resuscitation quality and patient survival outcome in cardiac arrest: A systematic review and meta-analysis. *Resuscitation*, 2015, 96:66-77.

## Conference presentations (Aus-ROC specific)

### European Resuscitation Council Congress, 2015, Prague, Czech Republic

- **Establishing the Australian Resuscitation Outcomes Consortium (Aus-ROC) Epistery.** Beck B, Bray J.E, Smith K, Walker T, Hein C, Thorrowgood M, Grantham H, Driscoll H, Smith A, Smith T, Dicker B, Swain A, Cameron P, Finn J.
- **Induction of therapeutic hypothermia during out-of-hospital cardiac arrest.** Stephen Bernard, Karen Smith, Judith Finn, Peter Cameron, Cindy Hein, Hugh Grantham, Janet Bray, Conor Deasy, Michael Stephenson, Lahn Straney, Teresa Williams.
- **Impact of change to target temperature management on post-arrest care for out-of-hospital cardiac arrest patients.** Janet Bray, Dion Stub, Jason Bloom, Louise Segan, Biswadev Mitra, Karen Smith, Judith Finn, Stephen Bernard.
- **Paramedic exposure to resuscitation is associated with cardiac arrest survival.** Kylie Dyson, Janet Bray, Karen Smith, Stephen Bernard, Lahn Straney, Judith Finn.
- **A systematic review of basic life support training targeting family members of high-risk patients.** Susie Cartledge, Janet Bray, Marion Leary, Dion Stub, Judith Finn.
- **Regional characteristic are associated with the variation in OHCA incidence and bystander CPR rates seen across Victoria, Australia.** Straney L, Bray J, Beck B, Finn J, Bernard S, Dyson K, Lijovic M, Smith K.
- **Traumatic out-of-hospital cardiac arrest in Perth, Western Australia from 1997 to 2014.** Beck B, Tohira H, Bray J, Straney L, Inoue M, Williams T, McKenzie N, Finn J.
- **Regions of high out-of-hospital cardiac arrest incidence and low bystander CPR rates in Victoria, Australia.** Beck B, Straney L, Bray J, Finn J, Bernard S, Dyson K, Lijovic M, Smith K.

### Council of Ambulance Authorities Conference 2015, Melbourne

- **Establishing the Australian Resuscitation Outcomes Consortium (Aus-ROC) Epistery.** Beck B, Bray J.E, Smith K, Walker T, Hein C, Thorrowgood M, Grantham H, Driscoll H, Smith A, Smith T, Dicker B, Swain A, Cameron P, Finn J

### Paramedics Australasia International Conference 2015, Adelaide

- **Paramedic exposure to out-of-hospital cardiac arrest resuscitation is associated with patient survival.** Dyson K, Bray J, Smith K, Bernard S and Finn J.

### Australian Resuscitation Council International Spark of Life Conference 2015, Melbourne

- **The Early Impact of Introducing a Post-Arrest Team and Protocol in the Emergency Department.** Bray J, Segan L, Bernard S, Mitra B, Stub D, Smith K, Finn J.
- **Mass media campaigns influence on prehospital behaviour for acute coronary syndromes: an evaluation of the Australian Heart Foundation's Warning Signs Campaign.** Janet Bray, Dion Stub, Philip Ngu, Susie Cartledge, Michelle Stewart, Wendy Keech, Harry Patsamanis, James Shaw, Judith Fin
- **Paramedic exposure to out-of-hospital cardiac arrest resuscitation is associated with patient survival.** Dyson K, Bray J, Smith K, Bernard S and Finn
- **Do Cardiac Rehabilitation Programs Offer Cardiopulmonary Resuscitation Training In Australia And New Zealand?** S Cartledge, J Bray, J Finn.

## Publications (Aus-ROC Investigators)

### Professor Peter Cameron

1. Barker AL, **Cameron PA**, Hill KD, et al. RESPOND—a patient-centred programme to prevent secondary falls in older people presenting to the emergency department with a fall: Protocol for a multicentre randomised controlled trial. *Injury Prevention*. 2015;21(1):1-7.
2. Barker AL, Talevshi J, Bohensky M, Brand CA, **Cameron PA**, Morello RT. Feasibility of Pilates exercise to decrease falls risk: A pilot randomized controlled trial in community-dwelling older people. *Clinical Rehabilitation*. 2015;Online first.
3. Bashir K, Qotb MA, Alkahky S, Fathi AM, Mohamed MA, **Cameron PA**. Are emergency physicians and paramedics providing canalith repositioning manoeuvre for benign paroxysmal positional vertigo? *EMA - Emergency Medicine Australasia*. 2015;27(2):179-180.
4. Brennan JH, Bernard S, **Cameron PA**, Rosenfeld JV, Mitra B. Ethanol and isolated traumatic brain injury. *Journal of Clinical Neuroscience*. 2015; 22(9): 1375-81.
5. Cassidy TJ, Edgar DW, Phillips M, **Cameron P**, Cleland H, Wood FM. Transfer time to a specialist burn service and influence on burn mortality in Australia and New Zealand: A multi-centre, hospital based retrospective cohort study. *Burns*. 2015;41(4):735-741.
6. Gabbe BJ, Braaf S, Fitzgerald M, et al. Restore: Recovery after serious trauma—outcomes, resource use and patient experiences study protocol. *Injury Prevention*. 2015;21(5):348-354.
7. Gabbe BJ, Lyons RA, Fitzgerald MC, Judson R, Richardson J, **Cameron PA**. Reduced population burden of road transport-related major trauma after introduction of an inclusive trauma system. *Annals of Surgery*. 2015;261(3):565-572.
8. Gabbe BJ, Hofstee DJ, Esser M, et al. Functional and return to work outcomes following major trauma involving severe pelvic ring fracture. *ANZ Journal of Surgery*. 2015; 85(10):749-54.
9. Gabbe BJ, Simpson PM, **Cameron PA**, et al. Association between perception of fault for the crash and function, return to work and health status 1 year after road traffic injury: a registry-based cohort study. *BMJ Open*. 2015;5:e009907.
10. Hobgood C, Mulligan T, Bodiwala G, et al. International federation for emergency medicine model curriculum for continuing professional development. *Canadian Journal of Emergency Medicine* 2015;17(3):295-309.
11. Kwan J, Jouriles N, Singer A, et al. Designing assessment programmes for the model curriculum for emergency medicine specialists. *Canadian Journal of Emergency Medicine*. 2015;17(4):462-467
12. Lee G, Dix S, Mitra B, Coleridge J, **Cameron P**. The efficacy and safety of a chest pain protocol for short stay unit patients: A one year follow-up. *European Journal of Cardiovascular Nursing*. 2015;14(5):416-422.
13. Lowthian JA, McGinnes RA, Brand CA, Barker AL, **Cameron PA**. Discharging older patients from the emergency department effectively: A systematic review and meta-analysis. *Age and Ageing*. 2015;44(5):761-770.
14. McQuilten ZK, Andrianopoulos N, van de Watering L, et al. Introduction of universal prestorage leukodepletion of blood components, and outcomes in transfused cardiac surgery patients. *Journal of Thoracic and Cardiovascular Surgery*. 2015; 150(1): 216-222.
15. Millar IL, McGinnes RA, Williamson O, et al. Hyperbaric Oxygen in Lower Limb Trauma (HOLLT); protocol for a randomised controlled trial. *BMJ Open*. 2015;5(6).

16. Mitra B, Nash JL, **Cameron PA**, Fitzgerald MC, Moloney J, Velmahos GC. Potentially avoidable blood transfusion during trauma resuscitation. *Injury*. 2015;46(1):10-14.
17. Morrison C, **Cameron P**. The case for environmental strategies to prevent alcohol-related trauma. *Injury*. 2015;46(7):1183-1185.
18. Morrison C, Smith K, Gruenewald PJ, Ponicki WR, Lee JP, **Cameron P**. Relating off-premises alcohol outlet density to intentional and unintentional injuries. *Addiction*. 2015;Online first
19. Nehme Z, Andrew E, Bray JE, et al. The significance of pre-arrest factors in out-of-hospital cardiac arrests witnessed by emergency medical services: A report from the Victorian Ambulance Cardiac Arrest Registry. *Resuscitation*. 2015;88:35-
20. Nehme Z, Bernard S, **Cameron P**, et al. Using a cardiac arrest registry to measure the quality of emergency medical service care decade of findings from the Victorian Ambulance cardiac arrest registry. *Circulation: Cardiovascular Quality and Outcomes*. 2015;8(1):56-66.
21. New PW, Stockman K, **Cameron PA**, Olver JH, Stoelwinder JU. Computer simulation of improvements in hospital length of stay for rehabilitation patients. *Journal of Rehabilitation Medicine*. 2015;47(5):403-411.
22. Nichol A, Gantner D, Presneill J, et al. Protocol for a multicentre randomised controlled trial of early and sustained prophylactic hypothermia in the management of traumatic brain injury. *Critical Care and Resuscitation*. 2015;17(2):92-100.
23. O'Reilly GM, Gabbe B, Braaf S, **Cameron PA**. An interview of trauma registry custodians to determine lessons learnt. *Injury*. 2015.
24. O'Reilly GM, Gabbe B, **Cameron PA**. Trauma registry methodology: A survey of trauma registry custodians to determine current approaches. *Injury*. 2015;46(2):201-206.
25. Palmer CS, Gabbe BJ, **Cameron PA**. Defining major trauma using the 2008 Abbreviated Injury Scale. *Injury*. 2015.
26. Riedlinger DI, Jennings PA, Edgar DW, et al. Scald burns in children aged 14 and younger in Australia and New Zealand - An analysis based on the Burn Registry of Australia and New Zealand (BRANZ) Australia and New Zealand - An analysis based on the Burn Registry of Australia and New Zealand (BRANZ). *Burns* 41(3): 462-468.
27. Smith G, Broek A, Taylor DM, Morgans A, **Cameron P**. Identification of the optimum vagal manoeuvre technique for maximising vagal tone. *Emergency Medicine Journal*. 2015;32(1):51-54.
28. Smith G, McD Taylor D, Morgans A, **Cameron P**. Measuring the effectiveness of a revised clinical practice guideline for the pre-hospital management of supraventricular tachycardia. *EMA - Emergency Medicine Australasia*. 2015;27(1):22-28
29. Stub D, Bernard S, Pellegrino V, et al. Refractory cardiac arrest treated with mechanical CPR, hypothermia, ECMO and early reperfusion (the CHEER trial). *Resuscitation*. 2015;86:88-94.
30. Stub D., Smith K .... Cameron PA et al. Air Versus Oxygen in ST-Segment–Elevation Myocardial Infarction. *Circulation*. 2015;131: 2143-2150.
31. Zatta A, McQuilten Z, Kandane-Rathnayake R, et al. The Australian and New Zealand Haemostasis Registry: Ten years of data on off-licence use of recombinant activated factor VII. *Blood Transfusion*. 2015;13(1):86-101.

## **Associate Professor Stephen Bernard**

1. Stub D, **Bernard S**, Pellegrino V et al. Refractory cardiac arrest treated with mechanical CPR, hypothermia, ECMO and early reperfusion (the CHEER Trial) *Resuscitation* 2015; 86:88-94
2. **Bernard SA**, Smith K, Porter R et al. Paramedic rapid sequence intubation in patients with non-traumatic brain injury. *J Emerg Med* 2015; 32:60-4

3. Smith K, Andrew E .... **Bernard S**. Quality of life and functional outcomes 12-months after out-of-hospital cardiac arrest. *Circulation* 2015; 131:174-81.
4. Olausson A, Shepherd M, Nehme Z, **Bernard S**, Mitra B. Return of consciousness and ongoing cardio-pulmonary resuscitation: A systematic review. *Resuscitation* 2015; 86:44-48.
5. Nehme Z, Andrew E .... **Bernard S** et al. The significance of pre-arrest factors in out-of-hospital cardiac arrests witnessed by emergency medical services: a report from the Victorian Ambulance Cardiac Arrest Registry. *Resuscitation* 2015; 88:35-42.
6. Nehme Z, **Bernard S**, Andrew E et al. Using a cardiac arrest registry to measure the quality of emergency medical service care: a decade of findings from the Victorian Ambulance Cardiac Arrest Registry. *Circ Cardiovasc Qual Outcomes* 2015; 8:56-66.
7. Nehme Z, Andrew E, **Bernard S**, Smith K. Comparison of out-of-hospital cardiac arrest occurring before and after paramedic arrival: Epidemiology, survival to hospital discharge and 12-month functional recovery. *Resuscitation* 2015; 89:50-7.
8. Dyson K, Bray J, Smith K, **Bernard S**, Straney L, Finn J. Paramedic exposure to out-of-hospital cardiac arrest is rare and declining in Victoria, Australia. *Resuscitation* 2015; 89:93-8.
9. Andrew E, de Wit A, Meadley B, Cox S, **Bernard S**, Smith K. Characteristics of patients transported by a paramedic-staffed helicopter emergency medical service in Victoria, Australia. *Pre-hospital and Emergency Care* 2015; 19:416-24.
10. Meadley B, Heschl S, Andrew E, de Wit A, **Bernard SA**, Smith K. Paramedic-staffed Helicopter Emergency Medical Service's Response to Winch Missions in Victoria, Australia. *Prehosp Emerg Care*. 2015 Aug 19:1-5.
11. Stub D, Smith K, **Bernard S** .... the AVOID Investigators. Air versus oxygen in patients with ST-segment elevation myocardial infarction. *Circulation* 2015; 131:2143-50.
12. Nichol A, Gantner D .... **Bernard S** et al. ,on behalf of the POLAR Investigators and ANZICS CTG. Protocol for a multi-centre randomised controlled trial of early and sustained prophylactic hypothermia in the management of traumatic brain injury. *Crit Care Resusc* 2015; 17:92-100.
13. Brennan JH, **Bernard S**, Cameron PA, Rosenfeld JV, Mitra B. Ethanol and isolated traumatic brain injury. *J Clin Neurosci* 2015; 22:1928-32.
14. Straney LD, Bray JE, Beck B, Finn J, **Bernard S**, Dyson K, Lijovic M, Smith K. Regions of high out-of-hospital cardiac arrest incidence and low bystander CPR rates in Victoria, Australia. *PLoS One* 2015; 10:e0139776.
15. Battistuzzo CR, Armstrong A, **Bernard S** et al. Early decompression following cervical spinal cord injury: Examining the process of care from accident scene to surgery. *J Neurotrauma*. 2015 Dec 9. [Epub ahead of print]

## Professor Judith Finn

1. **Finn JC**, Bhanji F, Lockey A et al. Part 8: Education, implementation, and teams: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Resuscitation*. 2015;95:e203-24.
2. Williams TA, **Finn J**, Fatovich D, Perkins GD, Summers Q, Jacobs I. Paramedic Differentiation of Asthma and COPD in the Prehospital Setting Is Difficult. *Prehosp Emerg Care*. 2015;19(4):535-43.

3. Talikowska M, Tohira H, **Finn J**. Cardiopulmonary resuscitation quality and patient survival outcome in cardiac arrest: A systematic review and meta-analysis. *Resuscitation*. 2015;96:66-77.
4. Schreuders LW, Bremner AP, Geelhoed E, **Finn J**. The relationship between nurse staffing and inpatient complications. *J Adv Nurs*. 2015;71(4):800-12.
5. Straney LD, Bray JE .... **Finn J** et al. Regions of High Out-Of-Hospital Cardiac Arrest Incidence and Low Bystander CPR Rates in Victoria, Australia. *PLoS One*. 2015;10(10):e0139776.
6. Coventry LL, Bremner AP, Williams TA, Celenza A, Jacobs IG, **Finn J**. Characteristics and Outcomes of MI Patients with and without Chest Pain: A Cohort Study. *Heart Lung Circ*. 2015;24(8):796-805.
7. Dyson K, Bray J, Smith K, Bernard S, Straney L, **Finn J**. Paramedic exposure to out-of-hospital cardiac arrest is rare and declining in Victoria, Australia. *Resuscitation*. 2015;89:93-8.
8. Rogers I, Shearer F, Rogers J, Ross-Adjie G, Monterosso L, **Finn J**. Paramedics' perceptions and educational needs with respect to palliative care. *Australasian Journal of Paramedicine*. 2015;12(5):1-7.
9. Morley PT, Lang E, **Finn JC** et al. Part 2: Evidence Evaluation and Management of Conflicts of Interest: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. *Circulation*. 2015;132(16 Suppl 1):S40-50.
10. Morley PT, Lang E .... **Finn JC** et al. Part 2: Evidence evaluation and management of conflicts of interest: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Resuscitation*. 2015;95:e33-e41.
11. Straney LD, Schlapbach LJ .... **Finn J**, Australian, New Zealand Intensive Care Society Paediatric Study G. Trends in PICU Admission and Survival Rates in Children in Australia and New Zealand Following Cardiac Arrest. *Pediatric critical care medicine: a journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies*. 2015;16(7):613-20.
12. Srisawat N, Sileanu F .... **Finn J** et al., on behalf of the Acute Kidney Injury-6 Study Group. Variation in Risk and Mortality of Acute Kidney Injury in Critically Ill Patients: A Multicenter Study. *American Journal of Nephrology*. 2015;41:81-8.
13. Nolan JP, Hazinski MF .... **Finn JC** et al. Part 1: Executive summary: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Resuscitation*. 2015;95:e1-e31.
14. Hazinski MF, Nolan JP .... **Finn JC** et al. Part 1: Executive Summary: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. *Circulation*. 2015;132(16 Suppl 1):S2-S39.
15. Perkins GD, Jacobs IG .... **Finn JC** et al. Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports: Update of the Utstein Resuscitation Registry Templates for Out-of-Hospital Cardiac Arrest: A Statement for Healthcare Professionals From a Task Force of the International Liaison Committee on Resuscitation (American Heart Association, European Resuscitation Council, Australian and New Zealand Council on Resuscitation, Heart and Stroke Foundation of Canada, InterAmerican Heart Foundation, Resuscitation Council of Southern Africa, Resuscitation Council of Asia); and the American Heart Association Emergency Cardiovascular Care Committee and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation. *Resuscitation*. 2015;96:328-40.



16. Perkins GD, Jacobs IG .... **Finn JC** et al. Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports: Update of the Utstein Resuscitation Registry Templates for Out-of-Hospital Cardiac Arrest: A Statement for Healthcare Professionals From a Task Force of the International Liaison Committee on Resuscitation (American Heart Association, European Resuscitation Council, Australian and New Zealand Council on Resuscitation, Heart and Stroke Foundation of Canada, InterAmerican Heart Foundation, Resuscitation Council of Southern Africa, Resuscitation Council of Asia); and the American Heart Association Emergency Cardiovascular Care Committee and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation. *Circulation*. 2015;132(13):1286-300.
17. Bray JE, Stub D .... **Finn J**. Mass Media Campaigns' Influence on Prehospital Behavior for Acute Coronary Syndromes: An Evaluation of the Australian Heart Foundation's Warning Signs Campaign. *Journal of the American Heart Association*. 2015;4(7).
18. Bray JE, Straney L, Barger B, **Finn J**. Effect of public awareness campaigns on calls to ambulance across Australia. *Stroke*. 2015;46(5):1377-80.
19. Bhanji F, **Finn JC**, Lockey A, et al. Part 8: Education, Implementation, and Teams: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. *Circulation*. 2015;132(16 Suppl 1):S242-68.

### Associate Professor Karen Smith

1. Eastwood, K, Morgan A, **Smith K**, Stoelwinder J, Becker G, Hodgkinson A. A novel approach for managing the growing demand for ambulance services by low-acuity patients. *Australian Health Review*. 2015;http://dx.doi.org/10.1071/AH15134.
2. Straney L, Bray J .... **Smith K**. Regions of High Out-of-Hospital Cardiac Arrest Incidence and Low Bystander CPR rates in Victoria, Australia. *PLOS ONE*. 2015;DOI:10.1371/journal.pone.0139776.
3. Cantwell K, Burgess S, Morgan A, **Smith K**, Livingston M and Dietz P. Temporal trends in falls cases seen by EMS in Melbourne: the effect of residence on time of day, day of week patterns. *Injury*. 2015 http://dx.doi.org/10.1016/j.injury.2015.10.073
4. Kaar SJ, Gao CX, Lloyd B, **Smith K** and Lubman D. Trends in cannabis-related ambulance presentations from 2000 to 2013 in Melbourne, Australia. *Drug and Alcohol Dependence* 2015;155: 24–30.
5. Morrison C, **Smith K**, Gruenewald P, Ponicki WR, Lee JP and Cameron P. Relating Off-Premise Alcohol Outlet Density to Intentional and Unintentional Injuries. *Addiction*. 2015; doi: 10.1111/add.13098
6. Jennings P, Lord B and **Smith K**. Clinically meaningful reduction in pain severity in children treated by paramedics: A retrospective cohort study. *American Journal of Emergency Medicine*. 2015; 33(11):1587-90.
7. Brichko L, Jennings P, Bain C, **Smith K**, Mitra B. Selecting cases for feedback to pre-hospital clinicians - a pilot study. *Australian Health Review*. 2015; http://dx.doi.org/10.1071/AH15079
8. Haikerwal A, Akram M .... **Smith K** et al. The impact of fine particulate matter (PM2.5) exposure during wildfires on cardiovascular health outcomes. *Journal of the American Heart Association*. 2015;4:e001653 doi: 10.1161/JAHA.114.001653
9. Stub D, **Smith K**, Bernard S et al. Air Versus Oxygen in ST-Segment Elevation Myocardial Infarction. *Circulation*. 2015;131:2143-2150
10. Arunogiri S, Gao CX, Lloyd B, **Smith K**, Lubman DI. The role of methamphetamines in psychosis-related ambulance presentations. *Australian and New Zealand Journal of Psychiatry*. 2015;49:949.

11. Cantwell K, Morgan A, **Smith K**, Livingston M, Dietz P. Temporal trends in cardiovascular demand in EMS: weekday versus weekend differences. *Chronobiology International*. 2015;32(6):731-8.
12. Meadly B, Heschl S, Andrew A, de Wit A, Bernard S and **Smith K**. A paramedic-staffed helicopter emergency medical service response to winch missions in Victoria, Australia. *Prehospital Emergency Care*. 2015;Early Online:1–5
13. Dennekamp M, Straney LD .... **Smith K** et al. Forest fire smoke exposures and out-of-hospital cardiac arrests in Melbourne Australia: A case cross over study. *Environmental Health Perspectives*. 2015;123:959-964.
14. Dyson K, Bray J, **Smith K**, Bernard S, Straney L and Finn J. Paramedic exposure to out-of-hospital cardiac arrest is rare and declining in Victoria, Australia. *Resuscitation*. 2015;89:93-8.
15. Nehme Z, Andrew E, Bernard S and **Smith K**. Comparison of out-of-hospital cardiac arrest occurring before and after paramedic arrival: epidemiology, survival to hospital discharge and 12-month functional recovery. *Resuscitation*. 2015;89:50-7
16. Morrison C, Ponicki W and **Smith K**. Social Disadvantage and Exposure to Low Price Alcohol in Off-Premise Outlets. *Drug and Alcohol Review* 2015 Jul;34(4):375-8.
17. Nehme Z, Bernard S .... **Smith K**. Using a Cardiac Arrest Registry to Measure the Quality of Emergency Medical Service Care. Decade of Findings From the Victorian Ambulance Cardiac Arrest Registry. *Circulation Cardiovascular Quality Outcomes*. 2015;8:56-66.
18. Middleton J, Sharwood LN .... **Smith K** et al. Right care, right time, right place: improving outcomes for people with spinal cord injury through early access to intervention and improved access to specialised care: study protocol. *BMC Health Services Research*. 2014;14:600.
19. Olaussen A, Shepherd M, Nehme Z, **Smith K**, Bernard S and Mitra D. Return of consciousness during ongoing Cardiopulmonary Resuscitation: A systematic review. *Resuscitation*. 2015;86:44-48.
20. Oteir AO, **Smith K**, Stoelwinder J, Middleton J, and Jennings PA. Should suspected cervical spinal cord injury be immobilised?: A systematic review. *Injury* 2015;46(4):528-35
21. Nehme Z, Andrew E .... **Smith K**. The significance of pre-arrest factors in out-of-hospital cardiac arrests witnessed by emergency medical services: a report from the Victorian Ambulance Cardiac Arrest Registry. *Resuscitation*. 2015;88:35-42.
22. Cantwell K, Morgan M, **Smith K**, Livingston M, Spelman T and Dietze P. Time of day and day of week trends in EMS demand. *Prehospital Emergency Care*. 2015;19(3):425-31
23. Andrew E, de Wit A, Meadly B, Cox S, Bernard S and **Smith K**. Characteristics of patients transported by a paramedic staffed helicopter emergency medical service in Victoria, Australia. *Prehospital Emergency Care*. 2015;19(3):416-24
24. Stub D, Bernard S .... **Smith K** et al. Refractory Cardiac Arrest Treated with Mechanical CPR, Hypothermia, ECMO and Early Reperfusion (the CHEER Trial). *Resuscitation*. 2015;86:88-94.
25. **Smith K**, Andrew E, Lijovic M, Nehme Z and Bernard S. Quality of life and functional outcomes 12-months after out-of-hospital cardiac arrest. *Circulation*. 2015;131:174-181.

## Professor Andrew Tonkin

1. Patel A, Cass A, Peiris D, Usherwood T, Brown A, Jan Stephen, Neal B, Hillis G, Rafter N, **Tonkin A**, Webster R, Billot L, Bompont S, Burch C, Burke H, Hayman N, Molanus B, Reid C, Shiel L, Togni S, Rodgers A for the Kanyini Guidelines. Adherence with the polypill (Kanyini GAP) Collaboration. A pragmatic randomised trial of a polypill-based strategy to improve use of indicated preventive treatments in people at high cardiovascular disease risk. *Europ J Prev Cardiol*. 2015;22(7):920-30. doi: 10.1177/2047487314530382.
2. Johnson DW, Pascoe EM, Badve SV et al. (**A Tonkin** member of Study Collaborative Group). A randomized, placebo-controlled trial of phentoxifylline on erythropoiesis-stimulating agent hyporesponsiveness in anemic patients with CKD: The handling erythropoietin resistance with oxpentifylline (HERO Trial). *Am J Kidney Dis*. 2015;65(1):49-57. doi:10.1053/j.ajkd.2014.06.020.
3. Huynh QL, Reid CM, Chowdhury EK, Huq MM, Billah B, Wing LMH, **Tonkin AM**, Simons LA, Nelson MR on behalf of the Second Australian National Blood Pressure Management Committee. Prediction of cardiovascular and all-cause mortality at 10 years in the hypertensive aged, *Am J Hypertension*. 2015;28(5):649-56. doi: 10.1093/ajh/hpu213.
4. Brown A, O'Shea RL, Mott K, McBride KF, Lawson T, Jennings GLR, on behalf of the ESSENCE Steering Committee (**A Tonkin**, member). Essential service standards for equitable national cardiovascular care for Aboriginal and Torres Strait Islander people. *Heart, Lung and Circulation*. 2015;24(2):126-141. doi.org/10.1016/j.hlc.2014.09.021.
5. Roberts M, Pilmore HL, Ierino FL, Badve SV, Cass A, Garg AX, Hawley C, Isbel NM, Krum H, Pascoe EM, **Tonkin AM**, Vergara LA, Perkovic V for the BLOCADE Study Collaborative Group. The rationale and design of the Beta-blocker to Lower Cardiovascular Dialysis Events (BLOCADE) Feasibility Study. *Nephrology*. 2015;20(3):140-7. doi: 10.1111/nep.12362.
6. Dennekamp M, Straney L, Erbas B, Abramson MJ, Keywood M, Smith K, Sim MR, Glass DC, Del Monaco A, Haikerwal A, **Tonkin AM**. Forest fire smoke exposures and out-of-hospital cardiac arrests in Melbourne, Australia: A case-crossover study. *Environmental Health Perspectives*. 2015;123(10):959-64. doi: 10.1289/ehp.1408436. IF 7.98.
7. Cholesterol Treatment Trialists' (CTT) Collaboration (**AT** member of Writing Committee). Efficacy and safety of LDL-lowering therapy among men and women in secondary and primary prevention: meta-analysis of individual data from 174,000 participants in 27 randomised trials. *Lancet*. 2015;385(9976):1368-1369. doi.org/10.1016/S0140-6736(14)61368-4.
8. Cannon C, Blazing MA, Giugliano RP, McCagg A, White JA et al for the IMPROVE-IT Investigators (**A Tonkin** member of International Steering Committee). Ezetimibe Added to Statin Therapy after Acute Coronary Syndromes. *New Eng J Med*. 2015;372:2387-2397. doi:10.1056/NEJMoa1410489. IF 55.873.
9. Sullivan DR, Watts GF, Nicholls SJ, Barter P, Grenfell R, Chow CK, **Tonkin A** and Keech A. Clinical guidelines on hyperlipidaemia: Recent developments, Future challenges and the need for an Australian review. *Heart, Lung and Circulation*. 2015; 24:495-502.
10. Harding J, Sooriyakumaran M, Anstey KJ, Adams R .....**Tonkin A**, Woodward M, Shaw J, Magliano D. The metabolic syndrome and cancer: is the metabolic syndrome useful for predicting cancer risk above its individual components. *Diabetes Metab*. 2015 Dec;41(6):463-9. doi:10.1016/j.diabet.2015.04.006. IF 2.85.
11. Harding J, Adams R ....**Tonkin A**, Woodward M, Shaw J, Magliano D. Int J Cancer. Comparison of anthropometric measures as predictors of cancer incidence: a pooled analysis of 11 Australian cohorts. *Int J Cancer*. 2015; 137(7):1699-708. doi: 10.1002/ijc.29529.
12. van Gaans D, Hugo G, **Tonkin AM**. The development of a spatial model of accessibility to Phase 2 cardiac rehabilitation programs. *J Spatial Science*. 2015 doi.org/10.1080/14498596.2015.1059375.
13. Roberts MA, Pilmore HL, Ierino FL, Badve SV, Cass A, Garg AX, Isbel NM, Krum H, Pascoe EM, Perkovic V, Scaria A, **Tonkin AM**, Vergara LA, Hawley CM for the BLOCADE Study Collaborative Group. The Beta-blocker to Lower Cardiovascular Dialysis Events (BLOCADE) Feasibility Study: a Randomized Controlled Trial. *AM J Kidney Dis*. 2015; doi:10.1053/j.ajkd.2015.10.029).

14. Wang Y, **Tonkin A**, Jones G, Hill C, Ding C, Wluka AE, Forbes A, Cicuttini FM. Does statin use have a disease modifying effect in symptomatic knee osteoarthritis? Study protocol for a randomised controlled trial. *Trials*. 2015;16:584. doi: 10.1186/s13063-015-1122-2.
15. Hopper I, Skiba M, von Lueder TG, Watanabe M, Funston R, **Tonkin A**, Krum H. Digoxin withdrawal worsens clinical status in stable patients with heart failure receiving optimal contemporaneous therapy--a randomized controlled trial. *J Card Fail*. 2015;21(9):779-81. doi: 10.1016/j.cardfail.2015.07.003.
16. **Tonkin AM**, Blankenberg S, Kirby A, Zeller T, Colquhoun DM, Funke-Kaiser A, Hague W, Hunt D, Keech AC, Nestel P, Stewart R, Sullivan DR, Thompson PL, West M, White HD, Simes J; LIPID study investigators. Biomarkers in stable coronary heart disease, their modulation and cardiovascular risk: The LIPID biomarker study. *Int J Cardiol*. 2015;201:499-507. doi: 10.1016/j.ijcard.2015.07.080.
17. Truelove M, Patel A, Bompont S, Brown A, Cass A, Hillis GS, Peiris D, Rafter N, Reid CM, Rodgers A, **Tonkin A**, Usherwood T, Webster R; Kanyini GAP Collaboration. The Effect of a Cardiovascular Polypill Strategy on Pill Burden. *Cardiovasc Ther*. 2015; doi: 10.1111/1755-5922.12151.

### Professor Hugh Grantham

1. Johnson M, Boyd L, **Grantham H**, Eastwood K. *Paramedic Principles and Practice ANZ: A clinical reasoning approach*. Melbourne: Elsevier Australia; 2015.
2. Majd, S.L., Power, J.H. and **Grantham, H.J.** Neuronal response in Alzheimer's and Parkinson's disease: the effect of toxic proteins on intracellular pathways. *BMC Neuroscience*. 2015;16(69).
3. Thompson, J., **Grantham, H.** and Houston, D. Paramedic capstone education model: Building work ready graduates. *Australasian Journal of Paramedicine*. 2015; 12(3).

### Associate Professor Peter Morley

1. Perkins GD, Jacobs IG, Nadkarni VM et al. Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports: Update of the Utstein Resuscitation Registry Templates for Out-of-Hospital Cardiac Arrest: A Statement for Healthcare Professionals From a Task Force of the International Liaison Committee on Resuscitation (American Heart Association, European Resuscitation Council, Australian and New Zealand Council on Resuscitation, Heart and Stroke Foundation of Canada, InterAmerican Heart Foundation, Resuscitation Council of Southern Africa, Resuscitation Council of Asia); and the American Heart Association Emergency Cardiovascular Care Committee and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation. *Circulation*. 2015;132(13):1286-300.
2. Hazinski MF, Nolan JP, Aickin R .... **Morley PT** et al. Part 1: Executive Summary: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. *Circulation*. 2015;132(16 Suppl 1):S2-S39.
3. **Morley PT**, Lang E, Aickin R et al. Part 2: Evidence Evaluation and Management of Conflicts of Interest: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. *Circulation*. 2015;132(16 Suppl 1):S40-50.
4. Callaway CW, Soar J, Aibiki M .... **Morley PT** et al. Advanced Life Support Chapter C. Part 4: Advanced Life Support: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. *Circulation*. 2015;132(16 Suppl 1):S84-S145.
5. Nolan JP, Hazinski MF, Aickin R .... **Morley PT** et al. Part 1: Executive summary: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Resuscitation*. 2015;95:e1-e31.
6. **Morley PT**, Lang E, Aickin R et al. Part 2: Evidence evaluation and management of conflicts of interest: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Resuscitation*. 2015;95:e33-e41.

7. Soar J, Callaway CW, Aibiki M .... **Morley PT** et al. Advanced Life Support Chapter C. Part 4: Advanced life support: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Resuscitation*. 2015;95:e71-e120.
8. Parr M, **Morley P**, Considine J et al. Ian Jacobs - Resuscitation leader, educator and researcher. *Resuscitation*. 2015;96:287-9.
9. Reynolds JC, Raffay V, Lang E, **Morley PT**, Nation K. When should chest compressions be paused to analyze the cardiac rhythm? A systematic review and meta-analysis. *Resuscitation*. 2015;97:38-47.
10. **Morley PT**. Quality Cardiopulmonary Resuscitation: Aspirational, But Not Enough? *Critical Care Medicine*. 2015;43(11):2508-9.
11. Donnino MW, Andersen LW, Berg KM .... **Morley PT** et al. Temperature Management After Cardiac Arrest: An Advisory Statement by the Advanced Life Support Task Force of the International Liaison Committee on Resuscitation and the American Heart Association Emergency Cardiovascular Care Committee and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation. *Circulation*. 2015.
12. Donnino MW, Andersen LW, Berg KM .... **Morley PT** et al. Temperature Management After Cardiac Arrest An Advisory Statement by the Advanced Life Support Task Force of the International Liaison Committee on Resuscitation and the American Heart Association Emergency Cardiovascular Care Committee and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation. *Resuscitation*. 2015.

### Associate Professor Tony Walker

1. Considine J, **Walker T**, Berry D. Development, implementation and evaluation of an interprofessional graduate program for nursing-paramedicine double-degree graduates. *Australian Health Review*. 2015;39(5):595-599.
2. Nichol A, Gantner D, Preneill J .... **Walker T**. Protocol for a multicentre randomised controlled trial of early and sustained prophylactic hypothermia in the management of traumatic brain injury. *Critical Care and Resuscitation*. 2015;17(2):92-100.
3. Stub D, Bernard S, Pellegrino V.... **Walker T**. Refractory cardiac arrest treated with mechanical CPR, hypothermia, ECMO and early reperfusion (the CHEER trial). *Resuscitation*. 2015;86:88-94.

### Professor Gavin Perkins

1. Price CL, Brace-McDonnell SJ, Stallard N, Bleetman A, Maconochie I, **Perkins GD**. Performance characteristics of five triage tools for major incidents involving traumatic injuries to children. *Injury*. 2015.
2. Lockey AS, Dyal L, Kimani PK .... **Perkins GD**. Electronic learning in advanced resuscitation training: The perspective of the candidate. *Resuscitation*. 2015;pii: S0300-9572(15)00805-9.
3. **Perkins GD**, Lockey AS, de Belder MA, Moore F, Weissberg P, Gray H; Community Resuscitation Group. National initiatives to improve outcomes from out-of-hospital cardiac arrest in England. *Emerg Med J*. 2015; pii: emermed-2015-204847.  
Scott J, Harris GJ, Pinder EM .... **Perkins GD**, McAuley DF, Widdrington JD, Wiscombe S, Baudouin SV, Roy AI, Linnett VC, Wright SE, Ruchaud-Sparagano MH, Simpson AJ. Exchange protein directly activated by cyclic AMP (EPAC) activation reverses neutrophil dysfunction induced by  $\beta$ -agonists, corticosteroids, and critical illness. *J Allergy Clin Immunol*. 2015; pii: S0091-6749(15)01099-4.

4. Couper K, Kimani PK, Abella BS .... **Perkins GD**; Cardiopulmonary Resuscitation Quality Improvement Initiative Collaborators. The System-Wide Effect of Real-Time Audiovisual Feedback and Post event Debriefing for In-Hospital Cardiac Arrest: The Cardiopulmonary Resuscitation Quality Improvement Initiative. Crit Care Med. 2015. [Epub ahead of print]
5. Fisher JD, Freeman K, Clarke A .... **Perkins GD**. Patient safety in ambulance services: a scoping review. Southampton (UK): NIHR Journals Library; 2015.
6. Warhurst G, Dunn G, Chadwick P .... **Perkins GD**. Rapid detection of health-care-associated bloodstream infection in critical care using multipathogen real-time polymerase chain reaction technology: a diagnostic accuracy study and systematic review. Health Technol Assess. 2015;19:1-142.
7. Scholefield BR, Morris KP, Duncan HP .... **Perkins GD**. Evolution, safety and efficacy of targeted temperature management after pediatric cardiac arrest. Resuscitation. 2015;92:19-25.
8. Dancer RC, Parekh D, Lax S .... **Perkins GD**. Vitamin D deficiency contributes directly to the acute respiratory distress syndrome (ARDS). Thorax. 2015;70:617-24.
9. Thorne CJ, Lockey AS, Bullock I .... **Perkins GD**. E-learning in advanced life support--an evaluation by the Resuscitation Council (UK); Advanced Life Support Subcommittee of the Resuscitation Council (UK). Resuscitation. 2015;90:79-84.
10. Thokala P, Goodacre S, Ward M, Penn-Ashman J, **Perkins GD**. Cost-effectiveness of Out-of-Hospital Continuous Positive Airway Pressure for Acute Respiratory Failure. Ann Emerg Med. 2015;65:556-563.e6.
11. Williams TA, Finn J, Fatovich D, **Perkins GD**, Summers Q, Jacobs I. Paramedic Differentiation of Asthma and COPD in the Prehospital Setting Is Difficult. Prehosp Emerg Care. 2015;19:535-43.
12. Freeman K, Field RA, **Perkins GD**. Variation in local trust Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) policies: a review of 48 English healthcare trusts. BMJ Open. 2015 Jan 13;5(1):e006517
13. Browne E, Hellyer TP, Baudouin SV .... **Perkins GD**, Simpson AJ. A national survey of the diagnosis and management of suspected ventilator-associated pneumonia. BMJ Open Respir Res. 2014 Dec 16;1(1):e000066.
14. **Perkins GD** et al. PARAMEDIC trial collaborators. Mechanical versus manual chest compression for out-of-hospital cardiac arrest (PARAMEDIC): a pragmatic, cluster randomised controlled trial. Lancet. 2014 Nov 16
15. Hellyer TP, Morris AC, McAuley DF .... **Perkins GD**. Diagnostic accuracy of pulmonary host inflammatory mediators in the exclusion of ventilator-acquired pneumonia. Thorax. 2015 Jan;70(1):41-7.
16. **Perkins GD**, Jacobs IG, Nadkarni VM, Berg RA, Bhanji F, Biarent D, Bossaert LL, Brett SJ, Chamberlain D, de Caen AR, Deakin CD, **Finn JC**, Grasner JT, Hazinski MF, Iwami T, Koster RW, Lim SH, Ma MH, McNally BF, Morley PT, Morrison LJ, Monsieurs KG, Montgomery W, Nichol G, Okada K, Ong ME, Travers AH, Nolan JP, Utstein C. Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports: Update of the Utstein Resuscitation Registry Templates for Out-of-Hospital Cardiac Arrest: A Statement for Healthcare Professionals From a Task Force of the International Liaison Committee on Resuscitation (American Heart Association, European Resuscitation Council, Australian and New Zealand Council on Resuscitation, Heart and Stroke Foundation of Canada, InterAmerican Heart Foundation, Resuscitation Council of Southern Africa, Resuscitation Council of Asia); and the American Heart Association Emergency Cardiovascular Care Committee and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation. Resuscitation. 2015;96:328-40.

17. **Perkins GD**, Jacobs IG, Nadkarni VM, Berg RA, Bhanji F, Biarent D, Bossaert LL, Brett SJ, Chamberlain D, de Caen AR, Deakin CD, **Finn JC**, Grasner JT, Hazinski MF, Iwami T, Koster RW, Lim SH, Huei-Ming Ma M, McNally BF, Morley PT, Morrison LJ, Monsieurs KG, Montgomery W, Nichol G, Okada K, Eng Hock Ong M, Travers AH, Nolan JP, Utstein C. Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports: Update of the Utstein Resuscitation Registry Templates for Out-of-Hospital Cardiac Arrest: A Statement for Healthcare Professionals From a Task Force of the International Liaison Committee on Resuscitation (American Heart Association, European Resuscitation Council, Australian and New Zealand Council on Resuscitation, Heart and Stroke Foundation of Canada, InterAmerican Heart Foundation, Resuscitation Council of Southern Africa, Resuscitation Council of Asia); and the American Heart Association Emergency Cardiovascular Care Committee and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation. *Circulation*. 2015;132(13):1286-300.

### Dr Teresa Williams

1. Coventry L, Bremner A, **Williams TA**, Celenza A. The effect of presenting symptoms and patient characteristics on prehospital delay in MI patients presenting to ED by ambulance: A cohort study. *Heart, Lung Circ*. 2015;24:943-50.
2. Coventry L, Bremner A, **Williams TA**, Celenza A, Finn J. Characteristics and outcomes of MI patients with and without chest pain: A cohort study. *Heart, Lung Circ*. 2015;24(8):796-805.
3. **Williams TA**, McKenzie N, Inoue M. Does therapeutic temperature management after cardiac arrest increase the risk of bleeding? *Aust Crit Care*. 2015;28:169-71.
4. **Williams TA**, McConigley R, Leslie G, Dobb G, Phillips M, Davies H, Aoun S. A comparison of outcomes among hospital survivors with and without severe comorbidity admitted to the intensive care unit. *Anaesthes Intensive Care*. 2015;43:230-7.
5. **Williams TA**, Finn J, Fatovich D, Perkins GD, Summers Q, Jacobs I. Paramedic differentiation of asthma and COPD in the prehospital setting is difficult. *Prehosp Emerg Care*. 2015;19:535-43.

### Professor Graham Nichol

1. **Nichol G** et al. Resuscitation Outcomes Consortium (ROC) Investigators, Trial of Continuous or Interrupted Chest Compressions During CPR. *N Engl J Med*, 2015: 373:2203-2214.
2. Kurz MC, Prince DK, Christenson J .... **ROC Investigators**. Association of advanced airway device with chest compression fraction during out-of-hospital cardiopulmonary arrest. *Resuscitation*. 2015 Oct 28;98:35-40. doi: 10.1016/j.resuscitation.2015.10.011.
3. Cheskes S, Schmicker RH, Rea T .... **Resuscitation Outcomes Consortium (ROC) investigators**. Chest compression fraction: A time dependent variable of survival in shockable out-of-hospital cardiac arrest. *Resuscitation*. 2015 Dec;97:129-35. doi: 10.1016/j.resuscitation.2015.07.003.
4. Andrusiek DL, Szydlo D, May S .... **ROC Investigators**. A Comparison of Invasive Airway Management and Rates of Pneumonia in Prehospital and Hospital Settings. *Prehosp Emerg Care*. 2015;19(4):475-81. doi: 10.3109/10903127.2015.1005263.
5. Adedipe AA, Fly DL, Schwitz SD .... **Nichol G**. Carotid Doppler blood flow measurement during cardiopulmonary resuscitation is feasible: A first in man study. *Resuscitation*. 2015 Jul 30;96:121-125. doi: 10.1016/j.resuscitation.2015.07.024.
6. **Nichol G**, Kim F. Bystander Interventions Can Improve Outcomes From Out-of-Hospital Cardiac Arrest. *JAMA*. 2015 Jul 21;314(3):231-2. doi: 10.1001/jama.2015.7519.
7. Seymour CW, Alotaik O, Wallace DJ .... **Nichol G**. County-Level Effects of Prehospital Regionalization of Critically Ill Patients: A Simulation Study. *Crit Care Med*. 2015

Sep;43(9):1807-15. doi: 10.1097/CCM.0000000000001133..

8. Haesloop O, Tillick A, **Nichol G**, Strote J. Superwarfarin ingestion treated successfully with prothrombin complex concentrate. *Am J Emerg Med*. 2015 May 29. pii: S0735-6757(15)00454-4. doi: 10.1016/j.ajem.2015.05.033.
9. **Nichol G**, Guffey D, Stiell IG et al. Post-discharge outcomes after resuscitation from out-of-hospital cardiac arrest: A ROC PRIMED substudy. *Resuscitation*. 2015 Aug;93:74-81. doi: 10.1016/j.resuscitation.2015.05.011.
10. Stub D, Schmicker RH, Anderson ML .... **Nichol G**; ROC Investigators. Association between hospital post-resuscitative performance and clinical outcomes after out-of-hospital cardiac arrest. *Resuscitation*. 2015 Jul;92:45-52. doi: 10.1016/j.resuscitation.2015.04.015.
11. Sutton RM, Case E, Brown SP .... **Nichol G**. A quantitative analysis of out-of-hospital pediatric and adolescent resuscitation quality--A report from the ROC epistry-cardiac arrest. *Resuscitation*. 2015 Aug;93:150-7. doi: 10.1016/j.resuscitation.2015.04.010.
12. Daya MR, Schmicker RH, Zive DM .... **Nichol G**. Out-of-hospital cardiac arrest survival improving over time: Results from the Resuscitation Outcomes Consortium (ROC). *Resuscitation*. 2015 Jun;91:108-15. doi: 10.1016/j.resuscitation.2015.02.003.
13. Mentzelopoulos SD, Mantzanas M, van Belle G, **Nichol G**. Evolution of European Union legislation on emergency research. *Resuscitation*. 2015 Jun;91:84-91. doi: 10.1016/j.resuscitation.2015.03.006.
14. Maynard C, Longstreth WT Jr, **Nichol G** et al. Effect of prehospital induction of mild hypothermia on 3-month neurological status and 1-year survival among adults with cardiac arrest: long-term follow-up of a randomized, clinical trial. *J Am Heart Assoc*. 2015 Mar 11;4(3):e001693. doi: 10.1161/JAHA.114.001693.
15. Schreiber MA, Meier EN, Tisherman SA .... **ROC Investigators**. A controlled resuscitation strategy is feasible and safe in hypotensive trauma patients: results of a prospective randomized pilot trial. *J Trauma Acute Care Surg*. 2015 Apr;78(4):687-95; discussion 695-7. doi: 10.1097/TA.0000000000000600.
16. Newgard CD, Meier EN, McKnight B .... **ROC Investigators**. Understanding traumatic shock: out-of-hospital hypotension with and without other physiologic compromise. *J Trauma Acute Care Surg*. 2015 Feb;78(2):342-51. doi: 10.1097/TA.0000000000000478.
17. Guyette FX, Meier EN, Newgard C .... **ROC Investigators**. A comparison of prehospital lactate and systolic blood pressure for predicting the need for resuscitative care in trauma transported by ground. *J Trauma Acute Care Surg*. 2015 Mar;78(3):600-6. doi: 10.1097/TA.0000000000000549.
18. Newgard CD, Meier EN, Bulger EM .... **ROC Investigators**. Revisiting the "Golden Hour": An Evaluation of Out-of-Hospital Time in Shock and Traumatic Brain Injury. *Ann Emerg Med*. 2015 Jul;66(1):30-41, 41.e1-3. doi: 10.1016/j.annemergmed.2014.12.004.
19. Brown SP, Wang H, Aufderheide TP .... **Nichol G**. A randomized trial of continuous versus interrupted chest compressions in out-of-hospital cardiac arrest: rationale for and design of the Resuscitation Outcomes Consortium Continuous Chest Compressions Trial. *Am Heart J*. 2015 Mar;169(3):334-341.e5. doi: 10.1016/j.ahj.2014.11.011.
20. Warren SA, Prince DK, Huszti E .... **Nichol G**. Volume versus outcome: More emergency medical services personnel on-scene and increased survival after out-of-hospital cardiac arrest. *Resuscitation*. 2015 Sep;94:40-8. doi: 10.1016/j.resuscitation.2015.02.019.
21. **Nichol G**, Strickland W, Shavelle D, et al. Prospective, multicenter, randomized, controlled pilot trial of peritoneal hypothermia in patients with ST-segment- elevation myocardial infarction. *Circ Cardiovasc Interv*. 2015 Mar;8(3):e001965. doi: 10.1161/CIRCINTERVENTIONS.114.001965.
22. Graffagnino C, Erlinge D, Keeble T, **Nichol G**. Current advances in the use of therapeutic hypothermia. *Ther Hypothermia Temp Manag*. 2015 Mar;5(1):9-12. doi:10.1089/ther.2015.1502.
23. Idris AH, Guffey D, Pepe PE .... **Nichol G**. Chest compression rates and survival following out-of-hospital cardiac arrest. *Crit Care Med*. 2015 Apr;43(4):840-8.



doi:10.1097/CCM.0000000000000824.

24. Kim F, Bravo PE, **Nichol G**. What is the use of hypothermia for neuroprotection after out-of-hospital cardiac arrest? *Stroke*. 2015 Feb;46(2):592-7. doi: 10.1161/STROKEAHA.114.006975.
25. van Belle G, Mentzelopoulos SD, Aufderheide T, May S, **Nichol G**. International variation in policies and practices related to informed consent in acute cardiovascular research: Results from a 44 country survey. *Resuscitation*. 2015 Jun;91:76-83. doi: 10.1016/j.resuscitation.2014.11.029.
26. Mozaffarian D, Benjamin EJ, Go AS .... **Nichol G**. Executive summary: heart disease and stroke statistics-2015 update: a report from the american heart association. American Heart Association Statistics Committee and Stroke Statistics Subcommittee. *Circulation*. 2015 Jan 27;131(4):434-41. doi: 10.1161/CIR.0000000000000157.

## Dr Janet Bray

1. Bhanji F, Finn JC, Lockey A, Monsieurs K, Frengley R, Iwami T, Lang E, Ma MH, Mancini ME, McNeil MA, Greif R, Billi JE, Nadkarni VM, Bigham B; on behalf of the Education, Implementation, and Teams Chapter Collaborators. Part 8: education, implementation, and teams: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. *Circulation*. 2015;132(suppl 1):S242–S268.
2. Finn JC, Bhanji F, Lockey A, Monsieurs K, Frengley R, Iwami T, Lang E, Ma MH, Mancini ME, McNeil MA, Greif R, Billi JE, Nadkarni VM, Bigham B; on behalf of the Education, Implementation, and Teams Chapter Collaborators. Part 8: education, implementation, and teams: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. *Resuscitation*. 2015;95:e203-24.
3. Straney L, **Bray JE**, Beck B, Finn J, Bernard S, Dyson K, Lijovic M, Smith K. Regions of High Out-of-Hospital Cardiac Arrest Incidence and Low Bystander CPR rates in Victoria, Australia. *Plos One* 2015;10; e0139776.
4. **Bray JE**, Stub D, Ngu P, Cartledge S, Straney L, Stewart M, Keech W, Shaw J, and Finn J. Mass media campaigns influence on prehospital behaviour for acute coronary syndromes: an evaluation of the Australian Heart Foundation's Warning Signs Campaign. *JAHA*. 2015;4:1-9.
5. Stub D, Smith K, Bernard S, Nehme Z, Stephenson M, **Bray JE**, Cameron P, Barger B, Ellims AH, Meredith IT, Kaye D, on behalf of the AVOID Investigators. Air Versus Oxygen in ST-Segment Elevation Myocardial Infarction. *Circulation*. 2015;131:2143-2150.
6. **Bray JE**, Straney L, Barger B, Finn J. The effect of public awareness campaigns on calls to ambulance across Australia. *Stroke*. 2015;46:1377-1380.
7. Straney L, Yong G, **Bray JE**, Millar J, Schlapbach L, Alexander J, Finn J. Trends in PICU Admission and Survival Rates in Children in Australia and New Zealand Following Cardiac Arrest. *Pediatric Critical Care Medicine*. 2015;16(7):613-20.
8. Dyson K, **Bray JE**, Smith K, Bernard S, Straney L, Finn J. Paramedic exposure to out-of-hospital cardiac arrest is rare and declining in Victoria, Australia. *Resuscitation*. 2015;89:93-98.
9. Nehme Z, Andrew E, **Bray JE**, Cameron P, Bernard S, Meredith IT, Smith K. The significance of pre-arrest factors in out-of-hospital cardiac arrests witnessed by emergency medical services: a report from the Victorian Ambulance Cardiac Arrest Registry. *Resuscitation*. 2015;88;35–42.
10. Nehme Z, Bernard S, Cameron P, **Bray JE**, Meredith IT, Lijovic M, Smith K. Using a Cardiac Arrest Registry to Measure the Quality of Emergency Medical Service Care: A Decade of Findings From the Victorian Ambulance Cardiac Arrest Registry. *Circulation: Cardiovascular Quality and Outcome*. 2015;8:56-66.

### Dr Lahn Straney

1. Bray J, Stub D, Ngu P, Cartledge S, **Straney L**, Stewart M, Keech W, Patsamanis H, Shaw J, Finn J. Mass media campaigns influence on prehospital behaviour for acute coronary syndromes: an evaluation of the Australian Heart Foundation's Warning Signs Campaign. *Journal of the American Heart Association*. 2015;4(7):e001927
2. Kennedy M, Wilson K, Gabbe B, **Straney L**, Bailey M. The Retrieval Rapid Emergency Medical Score in Retrieval Medicine. *Emergency Medicine Australasia*. 2015.
3. Dennekamp M, **Straney L**, Erbas B, Abramson MJ, Keywood M, Smith K, Sim MR, Glass DC, Del Monaco A, Haikerwal A, Tonkin AM. Forest Fire Smoke Exposures and Out-of-Hospital Cardiac Arrests in Melbourne, Australia: A Case-Crossover Study *Environmental Health Perspectives*. 2015;123(10):959-964
4. Bray JE, **Straney L**, Barger B, Finn J. Effect of public awareness campaigns on calls to ambulance across Australia. *Stroke*. 2015;46(5):1377-1380
5. **Straney L**, Schlapbach L, Yong G, Bray J, Millar J, Slater A, Alexander J, Finn J. Trends in Pediatric Intensive Care Unit admission and survival rates in children in Australia and New Zealand following cardiac arrest. *Pediatric Critical Care Medicine*. 2015;16(7):613-620.
6. Schlapbach L\*, **Straney L\***, Alexander J, McLaren G, Festa M, Schibler A, Slater A. Mortality Related to Invasive Infections, Sepsis and Septic Shock in Critically Ill Children in Australia and New Zealand, 2002 – 2013. *The Lancet Infectious Diseases*. 2015;15(1):46-54. \*joint first author
7. Lowthian J, Curtis A, **Straney L**, McKimm A, Keogh M, Stripp A. Redesigning Emergency Patient Flow with Timely Quality Care at The Alfred. *Emergency Medicine Australasia*. 2015;27(1):35-41.

### Dr Ben Beck

1. **Beck B**, Bilston L.E, Brown J, 'Injury Patterns of Rear Seat Occupants in Frontal Impact – an In-Depth Crash Investigation Study'. *Injury Prevention*. 2015; (In-Press).
2. **Beck B**, Carstairs G.L, Caldwell Odgers J.N, Doyle T.L.A, Middleton K.J, 'Jerry Can Carriage is an Effective Predictor of Stretcher Carry Performance'. *Ergonomics*. 2015;(In-Press).
3. Carstairs G.L, Ham D.J, Savage R.J, Best S.A, **Beck B**, Doyle T.L.A, A Box Lift and Place assessment is related to performance of several military manual handling tasks. *Military Medicine*. 2015;181(3):258-264.

## Staff and Student Awards

### Dr Janet Bray

- Heart Foundation of Australia - Ross Hohnen Award for Research Excellence
- American Heart Association -Resuscitation Science Symposium (RESS) Young Investigator Award
- Bethlehem Griffiths Research Foundation Young Researcher of the Year (Victoria)

### Dr Lahn Straney

- National Monash University Faculty Early Career Researcher Publication Prize for best paper in Public Health
- Heart Foundation of Australia - Ross Hohnen Award for Research Excellence

### Dr Ben Beck

- Monash University School of Public Health and Preventive Medicine Travel Grant
- European Resuscitation Congress Best of the Best (finalist)

### Ms Kylie Dyson

- Paramedics Australasia International Conference -Best Paper Award

### Ms Susie Cartledge

- Australian Resuscitation Council, Spark of Life Conference: 2<sup>nd</sup> Place, Free Paper Presentation
- The Cardiac Society of Australia and New Zealand: 2015 Affiliate Nursing Prize
- Trans-National Three Minute Thesis Competition: First Place, School Round, Monash University
- National Health and Medical Research Council: Postgraduate scholarship

### Ms Amy Seymour

- European Resuscitation Congress Young Investigator (finalist)

## Aus-ROC Steering Committee Members

Aus-ROC is governed by a Steering Committee which meets bi-monthly. The Steering Committee is comprised of Chief Investigators, Associate Investigators, Executive Officer and consumer representatives – with research fellows as co-opted members and PhD students as observers.

Prof Peter Cameron	Monash DEPM (CRE Chief Investigator 'A')
Prof Ian Jacobs ( <i>deceased 2014</i> )	Curtin University /SJA(WA)
Prof Stephen Bernard	Monash DEPM
Prof Judith Finn	Curtin University / Monash DEPM / SJA(WA) (CRE Director)
A/Prof Karen Smith	Ambulance Victoria
Prof Peter Thompson	Sir Charles Gairdner Hospital, Nedlands, WA
Prof Andrew Tonkin	Monash DEPM
Prof Hugh Grantham	Flinders Uni / SAAS
A/Prof Peter Morley	RMH / Uni Melb
A/Prof Tony Walker	Ambulance Victoria
Prof Antonio Celenza	UWA
Dr Teresa Williams	Curtin University
Dr Madouke Inoue	Curtin University (co-opted)
Ms Milena Talikowska	Curtin University (co-opted)
Ms Nicole McKenzie	Curtin University (co-opted)
Prof Andrew Forbes	Monash DEPM
Prof Graham Nichol	Uni of Washington / ROC Medical Director
Prof Gavin Perkins	Warwick Uni Medical School
Mr Jeff Waters	Consumer representative
Mr Brian Stafford	Consumer representative
Ms Meredith (Mim) Morgan	Monash DEPM (Aus-ROC Executive Officer)
Dr Cindy Hein	Flinders Uni / SAAS (co-opted)
Dr Janet Bray	Monash DEPM (co-opted) (CRE Associate Director)
Dr Lahn Straney	Monash DEPM (co-opted)
Dr Ben Beck	Monash DEPM (co-opted)
Miss Amy Seymour-Walsh	Flinders University (co-opted)
Ms Emma Masango	Monash DEPM (co-opted)

# Aus-ROC Financial Report

*1 January 2015 – 31 December 2015*

## INCOME

NHMRC Grant	\$484,625
Carry-over	\$241,470
<b>Total Income</b>	<b>\$726,095</b>

## PAYMENTS

Payment to Curtin University	\$136,771
Payment to Flinders University	\$27,648
<b>Total Payments</b>	<b>\$164,419</b>

## EXPENDITURE

Monash University staff costs	\$237,901
Direct Research costs	\$66,400
<b>Total Expenditure</b>	<b>\$304,301</b>

<b>Balance 31 Dec 2015</b>	<b>\$257,375</b>
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