



Government of Western Australia
Department of Health
South Metropolitan Health Service



CCREM
Centre for Clinical Research
in Emergency Medicine

Perkins
HARRY PERKINS INSTITUTE
OF MEDICAL RESEARCH

MRF
ROYAL PERTH HOSPITAL
Medical Research
Foundation

Centre for Clinical Research in Emergency Medicine

2016 Annual Research Report



Royal Perth Hospital



Government of **Western Australia**
Department of **Health**
WA Country Health Service



ARMADALE
HEALTH SERVICE



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

Centre for Clinical Research in Emergency Medicine

The Centre for Clinical Research in Emergency Medicine (CCREM) is a Centre within the Harry Perkins Institute of Medical Research, established in 2008 with start up and ongoing funding from Royal Perth Hospital, the Royal Perth Hospital Medical Research Foundation, and the Discipline of Emergency Medicine, University of Western Australia. Our research involves collaboration between academic emergency physicians working in the Emergency Department (ED), a team of research nurses recruiting patients presenting to the ED with acute illnesses, and scientists analysing samples in the laboratory using immunological and molecular biological techniques. We are unique in having a wet lab within the ED, which allows for timely specimen processing. CCREM research approaches include observational studies and laboratory work designed to uncover the mechanisms of disease, and randomised controlled trials designed to improve clinical care. We also endeavour to integrate laboratory and clinical research, using laboratory studies to help us understand the results of clinical trials. CCREM provides opportunities for both laboratory and clinical post-graduate honours and PhD students, and research terms for Emergency Medicine Advanced Trainees at Royal Perth Hospital and Fiona Stanley Hospital.

CCREM staff and associates

Royal Perth Hospital

Clinical Academics

Professor Daniel Fatovich MBBS FACEM PhD, Program Director

A/Professor Glenn Arendts MBBS MMed PhD FACEM

Dr Stephen Macdonald BSc MBChB DCH FRCP FACEM

Research management and administration

Ellen MacDonald RN, GradDipFN, MNursing, Clinical Nurse Manager

Cathy Read RN, BSc (Hons) National Coordinator PSP Study

Sophie Damianopoulos, Administrative Officer

Laboratory

Dr Erika Bosio BSc, PhD, Research Fellow

Ms Claire Neil BSc, Research Officer

Research Nurses

Lilian Offer RN, Helen Hamersley RN, Kristy Matthews RN, Karen Ridley RN

PhD Students

Dr Stephen Macdonald BSc MBChB DCH MRCP FACEM

Ms Abbie Francis BSc

Dr Lisa Smart BVSc (Hons) DipACVECC

Fiona Stanley Hospital

Clinical Academics

A/Professor Yusuf Nagree MBBS GradDipCompSci FACEM MBA(E)

Associate Professor Glenn Arendts MBBS MMed PhD FACEM

Research Nurses

Alannah Cooper RN, Gemma Eckermann RN

Armadale Health Service

Clinical Academic

Dr David McCutcheon MBBS FACEM

Research Nurse

Jonathon Burcham RN

South West Area Health Service

Clinical Academic

Dr Hugh Mitenko MBBS FACEM

NHMRC Centre of Research Excellence (CRE) in Translational Venom and Antivenom Research

Prof Simon Brown, University of Western Australia, is CI-D, with Ms Abbie Francis as a named Early Career Researcher, supervised by Dr Erika Bosio.

Notable New Funding

Arendts G. Medical and Health Research Infrastructure Fund. Funding Round 19. \$13,852

Armstrong C, Bosio E, Fatovich D. Does the early miRNA profile of cardiac arrest have prognostic potential? Sophie Lewis Fellowship in Acute Cardiovascular Emergencies, Australasian College for Emergency Medicine. \$60,000

Bosio E, Fatovich D. MicroRNAs in stroke. Royal Perth Hospital Medical Research Foundation. \$20,000

Briffa T, Cullen L, Chew D, Knuiman M, Fatovich D, Hickman P, Parsonage W, Nedkoff L, Sanfilippo F, Hillis G, Mitra B, Wilkes G, Schneider H, Rankin J, Karnon J, Scanlan S, Stapleton S, Mather V. Is highly-sensitive troponin testing advancing clinical practice, improving outcomes and cost-effective in the investigation and management of chest pain in the Emergency Department? National Health and Medical Research Council Project Grant APP1122792. \$1,197,000

Cameron P, Finn J, Bernard S, Grantham H, Smith K, Fatovich D, Arendts G, Bray J, Stub D, Perkins G. Centre of Research Excellence in Prehospital Emergency Care. National Health and Medical Research Council APP1116453. \$2,499,626

Hillis G, Alcock R, Spiro J, Fatovich D, Macdonald S, Schultz C, Briffa T, Geelhoed E. The Royal Perth evidence-based accelerated chest pain pathway implementation (RAPID) study. State Health Research and Advisory Committee. Research Translation Project. \$242,858

Macdonald S, Bosio E. The role of Resistin in endothelial cell activation in human sepsis. Royal Perth Hospital Medical Research Foundation. \$20,000 plus Research Assistant

Schnitker L, Beattie E, Arendts G, Carpenter C. The development and evaluation of an educational program for the care of older people with dementia in emergency departments. Alzheimer's Australia Dementia Research Foundation. \$50,000

Schnitker L, Arendts G, Carpenter C, LaGiudice D, Caplan G, Beattie E. Building delirium care for people with dementia into the emergency department (ED): Systematic development of the Delirium Action Response in ED (DARe-ED) intervention. Dementia Collaborative Research Centres. \$49,735

Smart L, Ho KM, Mori T, Barden A, Bord C. The effect of 4% succinylated gelatin on acute kidney injury in patients with critical illness. Royal Perth Hospital Medical Research Foundation. \$19,463

Williams T, Finn J, Arendts G, Fatovich D, McQuillan B, Perkins G, Hendrie D, Bailey P, Summers Q, Brink D. A randomised controlled trial of Continuous Positive Airway Pressure (CPAP) for the treatment of severe respiratory distress by ambulance paramedics in the pre-hospital setting. State Health Research Advisory Council Research Translation Project. \$97,345

Ongoing Funding

Brown S. A randomised controlled trial of interventional versus conservative treatment of primary spontaneous pneumothorax. National Health and Medical Research Council. Project Grant APP 1084941 \$401,143

Sim M, Wong M, (Arendts G. AI). Better access to home hospital for residents in aged care facilities. Western Australian Health Targeted Research Fund. \$345,769

Dey I, Love J, Arendts G, Hare M. Emergency Department Delirium Initiative (EDDI): A study targeting the early identification of patients at risk of delirium. Western Australian Health Targeted Research Fund. \$260,000

Finn J, Jacobs I, Fatovich D, Smith K, Williams T, Hendrie D, O'Halloran K, Cameron P. Improving ambulance dispatch to time-critical emergencies. National Health and Medical Research Council. Partnership Project Grant APP1076949. \$482,723

Fitzgerald L, Fatovich D, Pestell C. Identification of biomarkers that correlate with clinical features and outcomes following concussion. Neurotrauma Research Program. \$38,925

Forero R, Hillman K, Fatovich D, McCarthy S, Mountain D, Fitzgerald G, Richardson D, Sprivulis P, Middleton P. Validation and impact of the four hour rule in the emergency department: a large data linkage study. National Health and Medical Research Council. Partnership Project Grant APP 1029492. \$687,000

Isbister G, Buckley N, de Silva J, Brown S, Hodgson W, Lallo D, de Silva A, Dawson A, Gawarammana I, Graudins A. Translational Venom and Antivenom Research. National Health and Medical Research Council Centre for Research Excellence. \$2,495,164
Allocation to CCREM/UWA (S Brown) \$381,455

Rosenwax L, McNamara B, Semmens J et al (Arendts G. AI). Reducing demand on emergency departments in the last year of life. National Health and Medical Research Council Project Grant APP 1067331. \$358,835

Saw J, Lawn N, Fatovich D, Dunne J. Prognosis after first-ever seizure. Royal Perth Hospital Medical Research Foundation. \$19,088

Stafford A, Fatovich D, Bynevelt M, Licari M, Reynolds J, Christmass M, Quigley A. Methamphetamine Addiction: Is Baclofen effective in suppressing methamphetamine cravings? Functional MRI patterns of brain activation in Baclofen vs placebo treated methamphetamine addicts. State Health Research and Advisory Committee. Research Translation Project. \$251,904

New Research Projects

Coordinated by CCREM

Restricted Fluid Resuscitation in Sepsis-associated Hypotension Trial (REFRESH)

A multicentre randomised trial of fluid restricted versus fluid liberal resuscitation in early management of sepsis.

Western Australian Illicit Substance Evaluation (WISE)

A single centre observational study of patients with suspected intoxication with illicit stimulant drugs.

Collaborations - patient recruitment at CCREM sites, but coordinated by other centres or units

Australian Snakebite Project (ASP)

A national multicentre observational study investigating the appropriate use, dose and safety of snake antivenoms in Australia. (Dr G Isbister, University of Newcastle, Calvary Mater Hospital).

Knowledge Translation in Australasian Paediatric Acute Care Settings

A multi-centre, cluster, randomised controlled trial comparing a tailored, theory informed Knowledge Translation intervention versus passive dissemination of a bronchiolitis guideline (KT bronchiolitis study). (Armadale Health Service).

Ongoing Research Projects

Coordinated by CCREM

Assessing Risk in Sepsis using Tissue Oxygen Saturation (ARISTOS)

A clinical observational study examining the use of near infrared spectroscopy derived tissue oxygen saturation at the bedside in emergency department patients with sepsis to determine the utility of this measure to predict organ dysfunction.

Critical illness and shock study (CISS)

A prospective study of patients presenting to the emergency department with critical illness or injury that compromise the cardiovascular and/or respiratory systems. Currently focussing on the acute immune response to anaphylaxis and septic shock.

Emergency Department Delirium Identification (EDDI) trial

A clinical trial of a new delirium identification tool and early warning system.

Identification of biomarkers that correlate with clinical features and outcomes following concussion.

Clinical data, imaging, neuropsychological testing and blood samples of patients with concussion will be correlated with outcomes. This may lead to the development of improved tools for diagnosis and prognosis.

Primary Spontaneous Pneumothorax Study

An Australasian randomised controlled trial of conservative management with observation only versus interventional (aspiration and/or insertion of chest drain) treatment of primary spontaneous pneumothorax.

The RESPOND Project

A multi-centre randomised controlled trial of the RESPOND program to reduce secondary falls in older people presenting to the emergency department with a fall (Monash University).

Preferences for the organisation of acute health services for older people (PROSpER)

Preferences for providing acute medical care for people living in residential aged care facilities (University of Sydney).

Improving quality of life in residential aged care

A randomised controlled trial to reduce emergency department transfers and improve quality of life in residential aged care facilities.

FEM FIG BUG

A randomised triple-blind trial of ultrasound guided femoral nerve block versus fascia iliaca block for fractured proximal femur.

Collaborations - patient recruitment at CCREM sites, but coordinated by other centres or units

The prophylactic hypothermia trial to lessen traumatic brain injury (POLAR).

This trial will investigate whether early and sustained cooling of patients with severe traumatic brain injury is associated with better survival and less disability compared to standard care in which patients are maintained at normal temperature (Australian and New Zealand Intensive Care Society Clinical Trials Group).

The FluCAN Surveillance System

FluCAN is the first system in Australia to collect high quality and reliable data on hospitalised acute respiratory disease and other influenza related admissions in real time. Royal Perth Hospital participates as the sentinel site for Western Australia. (Dr A Cheng, Infectious Diseases Unit, Alfred Hospital).

Publications

Aboagye Sarfo P, Mai Q, Sanfilippo F, Fatovich D. Impact of population ageing on growing demand for emergency transportation to emergency departments in Western Australia, 2005-2020. *Emergency Medicine Australasia*. 2016;28(5):551-7

Arendts G, Carpenter C, Hullick C, Burkett E, Nagaraj G, Rogers I. Approach to death in the older emergency department patient. *Emergency Medicine Australasia*. 2016;28(6):730-4

Ball S, Williams T, Smith K, Cameron P, Fatovich D, O'Halloran K, Hendrie D, Whiteside A, Inoue M, Brink D, Langridge I, Pereira G, Tohira H, Chinnery S, Bray J, Bailey P, Finn J. The association between ambulance dispatch priority and patient condition. *Emergency Medicine Australasia*. 2016;28:719-24

Brown S, Ball E, Perrin K, Read C, Asha S, Beasley R, Egerton-Warburton D, Jones P, Keijzers G, Kinneer F, Kwan B, Lee Y, Smith J, Summers Q, Simpson G. Study protocol for a randomised controlled trial of invasive versus conservative management of primary spontaneous pneumothorax. *BMJ Open*. 2016;6(9):e011826

Cheng A, Holmes M, Dwyer D, Irving L, Korman T, Senenayake S, Macartney K, Blyth C, Brown S, Waterer G, Hewer R, Friedman N, Wark P, Simpson G, Upham J, Bowler S, Lessing A, Kotsimbos T, Kelly P. Influenza epidemiology in patients admitted to sentinel Australian hospitals in 2015: the Influenza Complications Alert Network. *Communicable Diseases Intelligence Quarterly Report*. 2016;40(4):E521-E6

Egerton-Warburton D, Gosbell A, Wadsworth A, Moore K, Richardson D, Fatovich D. Perceptions of Australasian emergency department staff of the impact of alcohol-related presentations. *Medical Journal of Australia*. 2016;204(4):155

Fatovich D. Truth, thinking and thrombolysis. *Emergency Medicine Australasia*. 2016;28(5):490-2

Fatovich D. The inverted U curve and emergency medicine: Over-diagnosis and the law of unintended consequences. *Emergency Medicine Australasia*. 2016;28(4):480-2

Francis A, Bosio E, Stone S, Fatovich D, Arendts G, Nagree Y, Macdonald S, Mitenko H, Rajee M, Burrows S, Brown S. Neutrophil activation during acute human anaphylaxis: analysis of MPO and sCD62L. *Clin Exp Allergy*. 2016 doi: 10.1111/cea.12868

Fry M, Chenoweth L, Arendts G. Assessment and management of acute pain in the older person with cognitive impairment: A qualitative study. *Int Emerg Nurs*. 2016;24:54-60

Idrees M, Macdonald S, Kodali K. Sepsis Early Alert Tool: Early recognition and timely management in the emergency department. *Emergency Medicine Australasia*. 2016;28(4):399-403

Kowalski M, Ansotegui I, Aberer W, Al-Ahmad M, Akdis M, Ballmer-Weber B, Beyer K, Blanca M, Brown S et al. Risk and safety requirements for diagnostic and therapeutic procedures in allergology: World Allergy Organization Statement. *The World Allergy Organization Journal*. 2016;9(1):33

McGinnes R, Hutton J, Weiland T, Fatovich D, Egerton-Warburton D. Effectiveness of ultra-brief interventions in the emergency department to reduce alcohol consumption: A systematic review. *Emergency Medicine Australasia*. 2016;28:629-40

Mountain D, Keijzers G, Chu K, Joseph A, Read C, Blecher G, Furyk J, Bharat C, Velusamy K, Munro A, Baker K, Kinnear F, Mukherjee A, Watkins G, Buntine P, Livesay G, Fatovich D. RESPECT-ED: Rates of Pulmonary Emboli (PE) and Sub-Segmental PE with Modern Computed Tomographic Pulmonary Angiograms in Emergency Departments: A Multi-Center Observational Study Finds Significant Yield Variation, Uncorrelated with Use or Small PE Rates. *PLOS ONE*. 2016;11(12):e0166483

Nagaraj G, Burkett E, Hullick C, Carpenter C, Arendts G. Is delirium the medical emergency we know least about? *Emergency Medicine Australasia*. 2016;28(4):456-8

Ryan N, Kearney R, Brown S, Isbister G. Incidence of serum sickness after the administration of Australian snake antivenom (ASP-22). *Clin Toxicol*. 2016;54(1):27-33

Stone S, Armstrong C, van Eeden P, Arendts G, Hankey G, Brown S, Fatovich D. Changes in differential gene expression during a fatal stroke. *Journal of Clinical Neuroscience*. 2016;23:130-4

Tankel A, Nagree Y, Jones P, Mountain D, Macdonald S, Hill P, Than M. The VHOT (Vindaloo Hastens Outpouring of Troponins) Study. *Emergency Medicine Australasia*. 2016;28(6):654-7

Thom O, Keijzers G, Taylor D, Fatovich D, Finucci D, Furyk J, Jin S, Macdonald S, Mitenko H, Richardson J, Ting J, Gibbs C, Chalkley. The TARGET pain study: Lessons from a painful marathon. *Emergency Medicine Australasia*. 2016;28(5):603-6

Tohira H, Fatovich D, Williams T, Bremner A, Arendts G, Rogers I, Celenza A, Mountain D, Cameron P, Sprivulis P, Ahern T, Finn J. Paramedic checklists do not accurately identify post-ictal or hypoglycaemic patients suitable for discharge at the scene. *Prehospital and Disaster Medicine*. 2016;31(03):282-93

Tohira H, Fatovich D, Williams T, Bremner A, Arendts G, Rogers I, Celenza A, Mountain D, Cameron P, Sprivulis P, Ahern T, Finn J. Which patients should be transported to the emergency department? A perpetual prehospital dilemma. *Emergency Medicine Australasia*. 2016;28:647-53

Tohira H, Fatovich D, Williams T, Bremner A, Arendts G, Rogers I, Celenza A, Mountain D, Cameron P, Sprivulis P, Ahern T, Finn J. Is it appropriate for patients to be discharged at the scene by paramedics? *Prehosp Emerg Care* 2016;20:539-549

Williams T, Martin R, Celenza A, Bremner A, Fatovich D, Krause J, Arena S, Finn J. Use of serum lactate levels to predict survival for patients with out-of-hospital cardiac arrest: A cohort study. *Emergency Medicine Australasia*. 2016;28(2):171-8

Published Abstracts

Arendts G, Jan S, Beck M, Howard K. Preferences for the organisation of acute health services for residential aged care. In: Australasian College for Emergency Medicine 32nd Annual Scientific Meeting Abstracts. *Emerg Med Australas*. 2016;28(S1):17

Arendts G, Etherton-Ber C, Jones R, Bullow K, MacDonald E, Dumas S, Parker D, Seymour H, Hutton M, Burrows S, Brown S, Almeida O. Use of a risk nomogram to predict emergency department reattendance in older people after discharge: a validation study. In: Australasian College for Emergency Medicine 32nd Annual Scientific Meeting Abstracts. *Emerg Med Australas*. 2016;28(S1):17

Arendts G, Bullow K, Etherton-Ber C, Jones R, MacDonald E, Dumas S, Nagree Y, Brown S, Almeida O. A randomised controlled trial of patient centred intervention to reduce re-presentations of older people at high risk after discharge. In: Australasian College for Emergency Medicine 32nd Annual Scientific Meeting Abstracts. *Emerg Med Australas*. 2016;28(S1):18

Francis A, Fatovich DM, Stone SF, Macdonald SPJ, Arendts G, Nagree Y, Mitenko H, Brown SGA. Serial mast cell tryptase measurements: sensitivity and specificity for a diagnosis of anaphylaxis in patients with shock and/or hypoxemia. *Eur. J. Immunol*. 2016. 46, S1, pg 839. Abstract 2720.

Francis A, Bosio E, Stone SF, Neil C, Fatovich DM, Arendts G, Nagree Y, Macdonald SPJ, Mitenko HMA, Rajee M, Burrows S, Brown SGA. Neutrophil activation during anaphylaxis. *Internal Medicine Journal* 46(S4):16-16 · September 2016. DOI: 10.1111/imj.36_13197

Smart L, MacDonald S, Burrows S, Bosio E, Arendts G, Fatovich D. Increased endothelial glycocalyx damage biomarkers in Emergency Department patients with infection, compared to trauma. *Shock* 2016;46(4S):42

Smart L, MacDonald S, Burrows S, Bosio E, Arendts G, Fatovich D. Associations of glycocalyx damage biomarkers with inflammation and endothelial activation in infection compared to trauma. *Shock* 2016;46(4S):59

Williams T, Finn, J, Fatovich D, Tohira H, Brink D, Perkins G, Ho K. Predicting sepsis using prehospital data from the ambulance service: A linked data cohort study. In: *Australian Critical Care* 2016;29(2):119

Posters

Tohira H, Fatovich D, Williams T, Bremner A, Arendts G, Rogers I, Celenza A, Mountain D, Cameron P, Sprivulis P, Ahern T, Finn J. Risk of representation or death in patients discharged at the scene by paramedics. *F1000Research* 2016, 5:1288 doi: 10.7490/f1000research.1112253.1. 16th International Conference on Emergency Medicine, Cape Town.

Halstrom A, MacDonald E, Neil C, Arendts G, Fatovich D, Fitzgerald M. Variation of circulating oxidative stress indicators following traumatic brain injury in a pilot study. Australasian Neuroscience Society Meeting, Hobart.

Francis A, Bosio E, Stone S, Neil C, Fatovich D, Arendts G, Nagree Y, Macdonald S, Mitenko H, Rajee M, Burrows S, Brown S. Neutrophil activation during anaphylaxis. Australasian Society of Clinical Immunology and Allergy Annual Meeting, Gold Coast.

Conferences

International

Arendts G. Community-based palliative care is associated with reduced emergency department use by people with dementia in their last year of life. 33rd Annual Scientific Meeting, Australasian College for Emergency Medicine, Queenstown, New Zealand.

Arendts G. Older people and the dignity of risk. 33rd Annual Scientific Meeting, Australasian College for Emergency Medicine, Queenstown, New Zealand.

Arendts G. Rates of delirium diagnosis and patient centred outcomes do not significantly improve with emergency risk screening: First results of the Emergency Department Delirium Initiative (EDDI) trial. 33rd Annual Scientific Meeting, Australasian College for Emergency Medicine, Queenstown, New Zealand.

Arendts G. Community-based palliative care is associated with reduced emergency department use by people with dementia in their last year of life. 16th International Conference on Emergency Medicine, Cape Town.

Arendts G. Bringing best practice to nursing home patients - in their home and ED. 16th International Conference on Emergency Medicine, Cape Town.

Fatovich D. The probability of probability and research truths. 33rd Annual Scientific Meeting, Australasian College for Emergency Medicine, Queenstown, New Zealand.

Fatovich D. A prospective study of Alcohol related presentations to Royal Perth Hospital Emergency Department. 33rd Annual Scientific Meeting, Australasian College for Emergency Medicine, Queenstown, New Zealand.

Fatovich D. Capturing the Art of Emergency Medicine: using film to foster reflection in medical students. 33rd Annual Scientific Meeting, Australasian College for Emergency Medicine, Queenstown, New Zealand.

Francis, A. Serial mast cell tryptase measurements: Sensitivity and specificity for a diagnosis of anaphylaxis in patients with shock and/or hypoxemia. International Congress of Immunology, Melbourne.

Smart L. Traumatic shock. 22nd International Veterinary Emergency and Critical Care Symposium, Grapevine, Texas, USA.

Smart L. Resuscitation options for the trauma patient. 22nd International Veterinary Emergency and Critical Care Symposium, Grapevine, Texas, USA.

Smart L. Glycocalyx damage in sepsis. 22nd International Veterinary Emergency and Critical Care Symposium, Grapevine, Texas, USA.

National

Arendts G, Lowthian J. Risk identification and transitions of care. Integrated Emergency Care in Older Persons, Melbourne.

Arendts G. Community-based palliative care for people with dementia. Be your Best: Promoting Health and Preventing Falls in Older Adults, Melbourne.

Arendts G. Primary and Secondary Prevention of ED attendance in independently living older people. Preventing Unnecessary Hospital Emergency Department Transfers for Older People Seminar, Melbourne.

Arendts G. Sepsis in the elderly. PHEMC Geriatric Emergency Medicine Seminar, Sydney.

Burcham J. Patients who do not wait in ED, who are they and why don't they wait? International Congress on Innovations in Nursing, Perth.

Francis, A. Neutrophil activation during human anaphylaxis. Australian Society of Clinical Immunology and Allergy Annual Symposium, Gold Coast.

Smart L. The glycocalyx: the gatekeeper to the endothelium. Australian College of Veterinary Scientists, Annual Scientific Meeting, Gold Coast

Local

Bosio, E. Distinct inflammatory responses differentiate cerebral infarct from transient ischaemic attack. Harry Perkins Institute of Medical Research Scientific Retreat.

Bosio, E. Distinct inflammatory responses differentiate cerebral infarct from transient ischaemic attack. Royal Perth Hospital Medical Research Foundation Research Day.

Francis, A. Anaphylaxis: Diagnosis and immune mechanisms. School of Primary, Aboriginal and Rural Health Care Seminar Series.

Francis, A. Gene expression networks associated with anaphylaxis. Royal Perth Hospital Medical Research Foundation Research Day.

Francis, A. Serum mast cell tryptase measurements to diagnose anaphylaxis. Royal Perth Hospital Medical Research Foundation Research Day.

Smart L. Endothelial glycocalyx damage in emergency department patients with sepsis and trauma. Royal Perth Hospital Medical Research Foundation Research Day.

Annual Research Symposium

Arendts G. Delirium Detection in ED: The results of the EDDI trial

Macdonald S. Biomarkers of Sepsis: the ED perspective

Smart L. Early glycoocalyx damage and inflammation in trauma and shock

Francis A. Understanding human anaphylaxis: The RNA sno-fall before the inflammatory avalanche

McCutcheon D. Novel Psychoactive Substances

Bosio E. Distinct inflammatory responses differentiate cerebral infarct from transient ischaemic attack

Nagree Y. Using BNP to improve the San Francisco Syncope Rules

Fatovich D. Priorities in Emergency Research Studies - Patient Expectations (The PERSPEX Study)

Fatovich D. Capturing the Art of Emergency Medicine: using film to foster reflection in medical students

Awards for research excellence

Armstrong C. (Supervisors Erika Bosio and Daniel Fatovich).
Sophie Lewis Fellowship in Acute Cardiovascular Emergencies, Australasian College for
Emergency Medicine.

Fatovich D. Edward Brentnall Award, Australasian College for Emergency Medicine.
Made to the author of an article published in a refereed journal, the content of which
made a significant contribution to public health.
Egerton-Warburton D, Gosbell AD, Wadsworth A, Moore K, Richardson D, Fatovich DM.
Perceptions of Australasian emergency department staff of the impact of alcohol-related
presentations. Med J Aust 2016 204:155e1-e6.

Francis, A. Neutrophil activation during anaphylaxis. Paul Clarke Poster Award,
Australian Society of Clinical Immunology and Allergy.
Francis A, Bosio E, Stone S, Neil C, Fatovich D, Arendts G, Nagree Y, Macdonald
S, Mitenko H, Rajee M, Burrows S, Brown S. Australasian Society of Clinical Immunology
and Allergy-P38. Neutrophil Activation during anaphylaxis. 2016 IMJ 46S4:5-29.

Smart L. Encouragement Award. Royal Perth Hospital Medical Research Foundation.

Sophus Falck Award. 16th International Conference on Emergency Medicine, Cape
Town.
Tohira H, Fatovich D, Williams T, Bremner A, Arendts G, Rogers I, Celenza A, Mountain
D, Cameron P, Sprivulis P, Ahern T, Finn J. Risk of representation or death in patients
discharged at the scene by paramedics. F1000Research 2016, 5:1288 doi:
10.7490/f1000research.1112253.1

Contacts

Clinical

Centre for Clinical Research in Emergency Medicine
Department of Emergency Medicine
Royal Perth Hospital Wellington Street Campus
Perth Western Australia 6000 Australia
GPO Box X2213 Perth Western Australia 6847 Australia
Ph: 08 9224 8458 Fax: 08 9224 1494

Laboratory

Centre for Clinical Research in Emergency Medicine
Harry Perkins Institute of Medical Research
Level 6, MRF Building Rear 50 Murray Street
Perth Western Australia 6000 Australia
Ph: 08 9224 0356 Fax: 08 9224 1494
Web: www.perkins.org.au/ccrem

