Centre for Clinical Research in Emergency Medicine

The Centre for Clinical Research in Emergency Medicine (CCREM) is a Centre within the Western Australian Institute for Medical Research (WAIMR), established in 2008 with start up and ongoing funding from Royal Perth Hospital and the Royal Perth Hospital Medical Research Foundation.

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.

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.

CCREM staff and associates, 2012

Royal Perth Hospital

Clinical Academics
Professor Simon Brown MBBS PhD FACEM, Program Director
Professor Daniel Fatovich MBBS PhD FACEM
Associate Professor Glenn Arendts MBBS MMed FACEM

Research Registrar
Dr Shelley Kirkbright MBBS FACEM

Research management and administration
Ellen MacDonald RN, Clinical Nurse Manager
Cathy Read RN, National Coordinator PSP Study
Sophie Damianopoulos, Administrative Officer
Sarah Fitzhardinge BSc MBA, Research Assistant

Laboratory
Assistant Professor Shelley Stone BSc PhD, Research Fellow
Dr Pauline van Eeden BSc PhD, Research Associate
Dr Tamara Jacoby-Alner BSc PhD, Adjunct Research Associate
Ms Claire Cotterell BSc, Research Assistant
Ms Leah Stone BSc, Research Assistant

Research Nurses
Helen Hamersley RN, Jen Wurmel RN, Clare Nash RN, Naomi Sweeting RN, Julie Honeyman RN, Jessica Peel RN, Dianne Catapang RN, Lani Hume RN

PhD Students
Dr Craig Ellis MBChB FACEM, Associate Professor Stephen Macdonald BSc MBChB DCH MRCP FACEM
Fremantle Hospital

Clinical Academic
Professor Yusuf Nagree MBBS FACEM MBA

Research management and administration
Karen Shakespeare RN, Research Coordinator
Sarah Gow RN, Research Nurse
Vanessa Camarda, Administrative Officer

Armadale Kelmscott Memorial Hospital

Clinical Academic
Associate Professor Stephen Macdonald BSc MBChB DCH MRCP FACEM

Research Nurses Alysee Pownall RN, Jane Sochacki RN, Kerry-Lee Dyke RN,
Jonathan Burcham RN

On Going and Notable New Funding For 2012

Modelling community preferences for health policy: how choice experiments can inform the organisation of acute health services for older Australians. Australian Research Council Discovery Project. Howard K, Arendts G, Jan S, Quine S. 2012-2014 $172,197


Venom allergy and anaphylaxis studies. Royal Hobart Hospital (Tasmania). Brown S. $36,680 per annum over three years 2011-2014

Medical and Health Research Infrastructure Fund (MHRIF), WA Department of Health. Brown S. 2012 $39,168

University of Western Australia NHMRC “Near Miss” funding for the project “A randomized controlled trial of invasive versus conservative treatment of primary spontaneous pneumothorax”. Brown S, $70,000
A randomised trial of patient centred intervention to reduce re-presentations of older people at risk after discharge from the Emergency Department. WA State Health Research Advisory Council Arendts G. 2012-14 $200,000

Granzyme B in acute ischaemic stroke. Royal Perth Hospital Medical Research Foundation Grant. van Eeden P, Armstrong C, Stone S, Brown S, Fatovich D and Hankey G. $16,500 + 0.5 FTE for a Research Assistant.


Validation and impact of the four hour rule in the Emergency Department: a large data linkage study. Forero R, Hillman K, Fatovich D, McCarthy S, Mountain D, Fitzgerald G, Richardson D, Sprivulis P and Middleton P. NHMRC 2012 Partnership project grant APP 1029492 $687,000, Western Australia Department of Health ($131,415), Australasian College for Emergency Medicine ($100,000), NSW Ministry of Health ($200,000). Total grant monies $1,718,864.

Investigations Ongoing

(1) Coordinated by CCREM

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 focusing on the acute immune response to anaphylaxis, septic shock, traumatic brain injury and post-cardiac arrest.

Clinical Associations with Acute Decompensated Diastolic Heart Failure in the Elderly (DHF Study)
A multicentre, prospective observational study following elderly patients with established DHF over a period of time by comparing their baseline characteristics when they are well to when they present unwell to the Emergency Department.

Emergency Department Complex Needs Coordination Team (ED CoNeCT)
A randomised trial of patient centred intervention to reduce re-presentations of older people at risk after discharge from the Emergency Department.

Jack Jumper Ant Venom Immunotherapy (JJA VIT) Trials
A study of immunotherapy dosing and immune response (IgE, IgG4). First phase published in the Journal of Allergy and Clinical Immunology (2012). Second phase is ongoing and expected to finish in 2013.

Mediators of Anaphylaxis to Snake Antivenom in Sri Lanka
In collaboration with the University of Newcastle, CCREM completed analysing biochemical mediators/mechanisms of anaphylaxis to snake antivenom in Sri Lanka.

Primary Spontaneous Pneumothorax Study
A randomised controlled trial of conservative management with observation only versus interventional (aspiration and/or insertion of chest drain) treatment of primary spontaneous pneumothorax.

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

Sepsis/Saline Trial
A pilot randomised trial of hypertonic saline versus normal saline as the initial bolus fluid in patients with infectious systemic inflammatory response syndrome.

Emergency Department Anaphylaxis Studies (EDA II and III)
(I) A randomised controlled trial of intramuscular versus intravenous adrenaline during anaphylaxis (III) A study of gene activation and biochemical mediators of anaphylaxis.

Chest Pain Registry
The chest pain registry is a longitudinal study of patients presenting to the Emergency Department with chest pain and is looking at medium term outcomes of these patients. Co-ordinated by CCREM partner, Fremantle Hospital Emergency Medicine Research.

Use of BNP in Syncope
This study is examining whether the use of a simple blood test (BNP) can improve diagnostic accuracy of patients presenting to the Emergency Department with syncope. Co-ordinated by CCREM partner, Fremantle Hospital Emergency Medicine Research.
Australasian Resuscitation in Sepsis Evaluation (ARISE Study)
A multi-centre, randomised controlled trial of early goal-directed therapy in patients presenting to the Emergency Department with severe sepsis in Australasia (ANZICS Clinical Trials Group).

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 (ANZICS Clinical Trials Group).

Australian Snakebite Project and Fresh Frozen Plasma Study (ASP-FFP)
A national multicentre prospective cohort study of snake envenoming and a randomised controlled trial of fresh frozen plasma in snake bite coagulopathy in Australia (Dr G Isbister, University of Newcastle, Calvary Mater Hospital).

Redback Antivenom Evaluation (RAVE) II Study
Randomised controlled trial of intravenous antivenom versus placebo in the treatment of redback spider bite (Dr G Isbister, University of Newcastle, Calvary Mater Hospital).

D-Dimer Study
A prospective observational study assessing the utility of the d-dimer assay in the elderly population for the diagnosis of venous thromboembolic disease (Dr S P’ng, Haematology Department, Royal Perth Hospital).

Evidence-based paramedic models of care to reduce unnecessary Emergency Department attendance: feasibility and safety
Development and validation of clinical protocols for extended care paramedics (Prof I Jacobs, University of Western Australia).

Functional status of survivors of out-of-hospital cardiac arrest (OCHA) in Perth
A retrospective observational study to determine the functional/neurological outcome of OHCA survivors discharged from hospital and to estimate the uptake of post-resuscitation practices such as therapeutic hypothermia and coronary reperfusion (Prof I Jacobs, University of Western Australia).

Paramedic Assessment and Referral to Access Medical care at Home (ParaMED Home)
A randomised controlled trial of paramedic referral to a home hospital service as an alternative to ED transfer for low acuity patients (M Sim, Faculty of Computing, Health and Science, Edith Cowan University).

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 WA. (Dr A Cheng, Infectious Diseases Unit, Alfred Hospital).

Emergency Department Pulmonary Embolism Diagnosis (EDPED)
Early discharge of patients diagnosed with low risk pulmonary embolism from the Emergency Department (Dr T Ericleve, Sir Charles Gairdner Hospital).
Publications 2012


Conferences including Proceedings, Papers & Posters

**International**

Fatovich D. Major trauma patients transferred from rural and remote Western Australia by the Royal Flying Doctor Service. International Data Linkage Conference, Perth, May 2012.


**National**

Arendts G. Preferences for acute health services for people in aged care. Menzies Centre for Health Policy, Sydney, August 2012.

Fatovich D. Major trauma patients transferred from rural and remote Western Australia by the Royal Flying Doctor Service. Australasian Trauma Society, Perth, October 2012.


Arendts G. Demography is destiny: ED research for the ageing population. Australasian College for Emergency Medicine Annual Scientific Meeting, Hobart, November 2012


Nagree Y. Development of Inter-collegiate clinical guidelines. Australasian College for Emergency Medicine Annual Scientific Meeting, Hobart, November 2012

**Local**


Contacts

**Clinical**

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