



Dr Andrew Davies
monitors an
Intensive Care patient.

INTENSIVE CARE

Head: Associate Professor Carlos Scheinkestel MBBS, FRACP, FJFICM

Head of Research: Professor Jamie Cooper BMBS, MD, FRACP, FJFICM

In 2007, there were 11 different research themes managed by intensivists at The Alfred. Six were NHMRC funded. The enthusiastic team of research co-ordinators who enabled this work were Lynette Murray, Shirley Vallance, Cindy Weatherburn, Siouxy Morrison, Rachael Nevill and Sue Varley.

Research Activities

- **Associate Professor Carlos Scheinkestel** managed the RENAL study – a multicentre randomised trial of renal support therapy in critical illness.
- **Dr Andrew Davies** was chief investigator on the multicentre ENTERIC randomised trial, testing improved enteral feeding in intensive care unit (ICU) patients; he also ran a nationwide observational study on feeding strategies in patients with pancreatitis.
- **Professor Jamie Cooper** is leading (with Professor Jeffrey Rosenfeld) the DECRA trial, an international randomised trial of decompressive surgery for severe traumatic brain injury (TBI). He is also leading the SAFE-TBI II study, searching for mechanisms behind improved mortality with saline compared to albumin for resuscitation in TBI patients. With Ruwan Wijemunige, Professor Cooper is investigating BIS monitoring in TBI patients, and testing CO₂ titration to improve brain oxygen concentrations. He is principal investigator on the national STATINS and ARISE randomised trials in patients with severe sepsis, and has assisted Megan Robertson on her Heparin in Severe Sepsis (HISS) program.
- **Associate Professor David Tuxen, Dr Alistair Nichol and Carol Hodgson** are testing an improved method of lung recruitment, and a better ventilator management strategy in acute respiratory distress syndrome (ARDS) patients in a Phase 2 randomised trial (PHARLAP).
- **Dr Andrew Hilton** has expanded his ECHO program and is investigating cardiac abnormalities in TBI patients.
- **Associate Professor Stephen Bernard** completed his landmark pre-hospital RSI in severe head injury pre-hospital randomised trial, and also managed RICH II, a study testing an improved method of cooling cardiac arrest patients pre-hospital.
- **Adam Dowrick** commenced (with Alfred hospital orthopaedic surgeons) a Phase 2 trial of two alternative methods of acute femur fixation in trauma patients with broken legs.
- **Dr Silvana Marasco** (cardiothoracic surgeon) manages a surgical rib fixation randomised trial in flail-chest patients with Professor Jamie Cooper and Dr Andrew Davies.
- **Associate Professor Bob Salamonsen** continues his important work with the thromboelastogram, extracorporeal membrane oxygenation and development of a physiological control mechanism for rotary blood

pumps (in collaboration with the University of NSW and Ventracor Ltd).

- **Dr David Pilcher** studies ICU outcomes using the bi-national ICU database, particularly in regard to ICU discharge patterns and survival.
- **Dr Vincent Pelligrino** managed the multicentre NAVIGATOR trial testing an improved monitoring and haemodynamic management system for acute cardiothoracic ICU patients.

Major Findings

- The SAFE-TBI study found that trauma patients with brain injury had significantly improved survival after saline resuscitation compared to albumin (published in *New England Journal of Medicine*).
- The VASST study found that low dose vasopressin improved survival in selected patients with septic shock (published in *New England Journal of Medicine*). The Alfred coordinated the other Australian sites in a Canadian-Australian non-industry research collaboration. Vincent Pelligrino was instrumental in the success.
- The LOVS study (also a Canadian-Australian research collaboration) reported that higher levels of PEEP did not improve outcomes in patients with ARDS (published in the *Journal of the American Medical Association*). Andrew Davies' work on this project was critical.

Achievements

- Helen Ackland received the Rob Johnstone award for best presentation at the ASM annual meeting of the Australian Spine Society.
- David Pilcher received the best medical paper award at the Australian and New Zealand Intensive Care Society (ANZICS) annual meeting.
- Alistair Nichol received the Matt Spence Medal for the best registrar paper at the ANZICS annual meeting.
- Jamie Cooper was appointed full Honorary Professor of Medicine at University of Sydney.
- Intensivists received four major research grants: one from Victorian Neurotrauma Initiative, two from the Victorian Trauma Foundation and the \$2.4 million ARISE NHMRC Project Grant.

Postgraduate Students

- 1 Masters student
- 2 PhD students

Publications

- 24 journal articles
- 1 book chapter
- 1 electronic publication