

# Anaesthesia and Perioperative Medicine

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TheAlfred



The Department of Anaesthesia and Perioperative Medicine is amongst the largest in Australia, consisting of 29 fulltime and over 50 visiting specialist anaesthetists, as well as 40 registrars in training. The department provides anaesthesia, perioperative care, pain management, resuscitation and referral services for Alfred Health. Academic affiliation with Monash University is strong, with Professor Paul Myles appointed as Chair of the Academic Board of Anaesthesia and Perioperative Medicine.

A dynamic research unit within the department focuses on patient safety, quality of care, improving pain relief and avoiding serious complications after surgery. The research unit is headed by Paul Myles (supported by an NHMRC Practitioner Fellowship) and funded through a number of large NHMRC grants. Dr James Tomlinson and Dr Joel Symons were appointed as senior lecturers and Dr Georgina Thompson is the department's first research fellow.

In 2010, Paul Myles was awarded the Australian and New Zealand College of Anaesthetists' prestigious Robert Orton Medal for distinguished service to anaesthesia. Paul was successful with two new NHMRC Project Grants commencing in 2011: continued funding of \$3.3 million for the ATACAS trial (as CIA) and \$1.1 million for POISE-2 (as CIB).

## Current Projects

The unit is currently coordinating four multicentre international trials and participating in a further five trials, including randomised clinical trials, audits and surveys. The larger trials, led by Paul Myles, include:

### ENIGMA-II Trial [www.enigma2.org.au](http://www.enigma2.org.au)

One of the biggest research initiatives of the department is to investigate the safety of nitrous oxide in 7,000 patients undergoing major surgery who have risk factors for coronary artery disease. It is expected that avoidance of nitrous oxide will reduce the incidence of cardiac complications or death when compared with otherwise identically managed surgical patients receiving a non-nitrous oxide anaesthesia regimen. This multicentre international trial, funded by a \$2.8 million NHMRC grant, commenced in May 2007.

*Inaugural ANZCA Research Fellow Dr Georgina Thompson implemented an enhanced recovery after surgery study across three Victorian hospitals.*



Coordination of the trial is by the department together with the ANZCA Trials Group. Collaborating research groups are in Australia, New Zealand, Hong Kong, Canada, USA, India, Saudi Arabia, UK, Malaysia, Switzerland and Singapore.

### The ATACAS Trial [www.atacas.org.au](http://www.atacas.org.au)

The Aspirin and Tranexamic Acid for Coronary Artery Surgery (ATACAS) Trial is a multicentre, randomised, controlled trial established to answer whether aspirin or tranexamic acid, or both, should be used in people having heart bypass surgery. This NHMRC and ANZCA funded trial is jointly coordinated by the ANZCA Trials Group and the department, and aims to enrol 4,600 patients. Collaborators are based in Australia, the UK, India and Canada.

Despite some concern that recent aspirin ingestion increases blood loss after coronary artery surgery, there is some evidence that this may reduce thrombotic complications. In contrast, antifibrinolytic drugs can reduce blood loss in this setting, but there is concern that they may increase thrombotic complications. Published guidelines are limited by a lack of large randomised trials addressing the risks and benefits of each of these commonly used therapies in cardiac surgery.

### MASTER Recurrence Trial

This study will test the hypothesis that intraoperative and postoperative epidural analgesia for high-risk (ASA III-IV) patients undergoing major abdominal surgery and complete resection of cancer results in a significant decrease in cancer recurrence and death in the 7 to 12 years after surgery. The study was built on the MASTER trial, which was a large multicentre, randomised trial 1996-2001 that compared epidural regional block with opioid-based analgesia with standard, non-epidural analgesia in 915 high-risk patients having major thoracic or abdominal surgery. A majority of these patients underwent surgery for intra-abdominal cancer. Those patients who underwent cancer surgery were followed up to determine if their cancer has returned, when it returned, and their survival status.

### Enhanced Recovery After Surgery (ERAS)

The aim is to evaluate an enhanced recovery after surgery (ERAS) program for abdominal surgical patients in three Victorian hospitals. The project was funded through the Department of Health. The implementation of a comprehensive ERAS program took place over two months and included the education of surgeons, anaesthetists, nurses and allied health professionals.

Data were collected on 154 patients in the pre-implementation cohort and 169 in the ERAS cohort. The conclusion of the project showed that preoperative and surgical practices can be readily modified to incorporate an enhanced recovery program. Training of doctors and nurses in the application of this program improved the quality of care for these patients.

### Postgraduate Students

5 Masters Students  
2 PhD Students

### Publications

23 Journal Articles