

RESEARCH

A research sub-committee of the CareFlight Medical Committee oversees the research program. Membership currently comprises:

Alan Garner FACEM (Chair)
 Rod Bishop FACEM
 Blair Munford FANZCA
 Ken Harrison FANZCA



The major current research project is the Head Injury Retrieval Trial. This is a randomized, controlled trial comparing physician care with paramedic care for severe blunt head injury in the Sydney region. The trial will cost in excess of \$11 million to run over three and a half years and is being supported by NRMA Insurance. Patients likely to have a severe head injury are identified at the time of the '000' call and randomized to either physician or paramedic care. If randomized to physician care, a dedicated team will be dispatched to the incident site by helicopter. Follow up will be at six months post injury and will be measured by the extended Glasgow Outcome Scale and a number of other outcome measures. Retrospective data suggests that physician care may be associated with a decrease in mortality of one third, and a halving of severe disability rates in survivors.

Other current research and projects for 2009 include:

Project Leader	Project	Description
Dr David Murphy	Comparison of respiratory function during hoist rescue in single and double slings, stretchers and the US Coast Guard Rescue Basket (USCGRB)	Previous studies have demonstrated impairment of respiratory function during hoist rescue in slings or stretchers due to either chest compression or positioning. No previous study has examined the effect of the USCGRB on respiratory function. As the patient is in a seated position during rescue without chest compression it is theorized that the USCGRB will produce less respiratory compromise than other rescue modalities.
Dr Alan Garner	Effect of the HIRT tasking model on paediatric interhospital transport in the Sydney region	Examines the effect of introduction of the HIRT tasking model for paediatric cases. Paediatric responses have been conducted outside of the trial since trial commencement with a larger number of cases transported directly to paediatric trauma centres than under the previous system.
Dr Alan Garner	TISS scoring as a quality tool in a critical care transport system	Examines the use of TISS scores during various phases of interhospital transport to monitor appropriateness of resuscitation
Dr Ken Harrison	Rates of desaturation and hyper/hypocapnia during prehospital intubation	Previous studies have documented surprisingly high rates of desaturation and hyper/hypocapnia. This looks at the rate of these secondary insults in the HIRT treatment group.
Dr Ken Harrison	Airway emergency responses	Qualitative analysis of the response of experienced clinicians to the "can't intubate, can't ventilate" scenario.
Dr Ken Harrison	Mock vehicle for the teaching of pre-hospital emergency medicine	Development of simulation model for teaching medical response to motor vehicle accident entrapment scenarios.
Dr Ken Harrison	Model for insertion of chest drain training.	Development of a simulation model for teaching chest drain insertion.