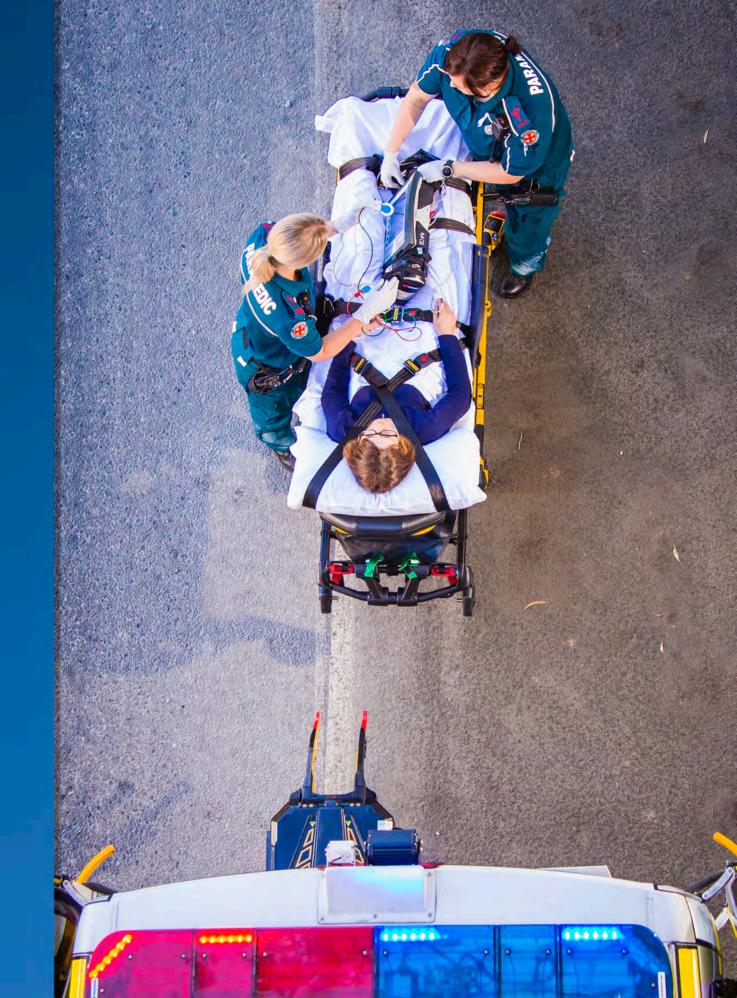# Current Clinical Research

Evaluation of a state-wide pre-hospital reperfusion program for STEMI patients in Queensland

Study Name:	Continual data collection, data analysis and evaluation of a state-wide pre-hospital reperfusion program for patients with ST-segment elevation myocardial infarction (STEMI) in Queensland.
Status:	**Ongoing**
Background:	Optimal pre-hospital management is critical for improving the outcomes of STEMI patients who are attended by paramedics. Beginning in February 2008, QAS Critical Care Paramedics commenced a pre-hospital reperfusion program for STEMI patients. The STEMI program has expanded over time, including the implementation of state-wide Clinical Practice Procedures, the introduction of enoxaparin (2011) and ticagrelor (2015), and the implementation of decision supported pre-hospital management by Advanced Care Paramedics (2015). An electronic database was developed to prospectively collect data on the pre-hospital clinical management of STEMI patients attended by QAS paramedics. Since January 2016, QAS joined the Queensland Cardiac Outcomes Registry (QCOR), which collects data on the in-hospital management and outcomes of STEMI patients admitted to public hospitals in Queensland. Continual collection and analysis of the STEMI data provide important insights into patient outcomes and the quality of QAS pre-hospital services.
Aim:	To continually develop and maintain the STEMI database, and to analyse the data to evaluate service delivery and performance.
Outcome Measures:	- *Patient characteristics; spatiotemporal trends of STEMI cases; and the timeliness, safety and guideline-concordance of pre-hospital management for STEMI patients attended by QAS paramedics.* - *Clinical outcomes, survival and determinants of survival in STEMI patients attended by QAS paramedics.* - *Health economic evaluation of pre-hospital STEMI management.*
Study Design:	Continual analysis of routinely collected data by QAS and linked hospital data for patients with STEMI who are attended by QAS paramedics.
Participation study sites:	Queensland Ambulance Service, Statewide Cardiac Clinical Informatics Unit (Queensland Health)
Statistical consideration:	Descriptive statistics are used initially. Logistic regression is used to assess potential determinants for patient outcomes.

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Study (continued)	
QAS involvement:	QAS leads all aspects of the project. The dataset comprises vital data contributed by paramedics through the STEMI data collection form, Reperfusion checklist, eARF, DCARF and CORPATCH CPR SUMMARY (where relevant) and ECG strip.
Further information:	Information Support, Research & Evaluation Unit (Tel: 07 3022 1934)

Queensland Ambulance Service Cardiac Arrest Outcomes Program

Study Name:	Queensland Ambulance Service Cardiac Arrest Outcomes Program
Status:	Ongoing Findings of the analysis using QAS cardiac arrest data from 2000 to 2016 are available at: https://www.ambulance.qld.gov.au/publications.html. Subsequent publications to follow.
Background:	The QAS Cardiac Arrest Outcomes Program encompassing the Cardiac Arrest Database (CADB) was established in 1999. Primary data sources include the electronic Ambulance Report Form (eARF), the Computer Aided Dispatch (CAD), the Death and Cardiac Arrest Report Form (DCARF), Electrocardiogram (ECG) rhythm strip and Corpuls Mission Protocol, and hospital discharge information. Key data elements such as ambulance response times, prevalence of bystander cardiopulmonary resuscitation, presumed aetiology and survival can be derived from the CADB. This project uses the CADB to report the findings of out-of-hospital cardiac arrest (OHCA) attended by QAS paramedics to measure service delivery and performance.
Aim:	To investigate the clinical and demographic characteristics, and survival of OHCA patients who are attended by QAS paramedics.
Outcome Measures:	• Spatiotemporal distribution of OHCA cases attended by QAS paramedics. • Demographic (age, gender, type of location of incidence, witnessed/unwitnessed arrest) and clinical (initial rhythm, aetiology) characteristics of OHCA cases attended by QAS paramedics. • Survival outcomes.
Study Design:	Continual analysis of routinely collected data by QAS and linked hospital data for patients with OHCA who are initially treated by QAS paramedics.
Participation study sites:	Queensland Ambulance Service
Statistical consideration:	Descriptive statistics are used initially. Logistic regression is used to assess potential determinants for patient outcomes.
QAS involvement:	Queensland QAS leads all aspects of the project. The collection comprises vital data contributed by paramedics through the DCARF, eARF, ECG rhythm strip and Corpuls Mission Protocol.
Further information:	Information Support, Research & Evaluation Unit (Tel: 07 3022 1934)