Pre Hospital Thrombolysis (PHT) For Rural NSW

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General facts

- NSW Ambulance responsible for more than 802,000 sq.km.
- 40% live outside Sydney and 15% live west of the Great Divide
- ASNSW has 270 locations
- ASNSW one of the two largest ambulance providers in the world
- Well positioned to provide health services to remote and rural regions of NSW
The Strategy: Statewide Cardiac Reperfusion Strategy (SCRS)

Provides early access cardiac reperfusion to rural communities by reducing the time between paramedic diagnosis of a heart attack (STEMI) and definitive treatment

- Reducing time from symptom onset to definitive treatment
- Improving pre-hospital management of STEMI
- Supported by a system of integrated health services
The Stakeholders

- Statewide Cardiac Reperfusion Strategy (SCRS)
- Collaboration across health providers is essential
- Supported by a system of integrated health services
- NSW Ambulance (ASNSW), NSW Health, Cardiologist, Agency For Clinical Innovation (ACI) and Local Health Districts (LHD)
What is a STEMI

Early reperfusion is the best treatment

Minimising delays improves outcomes

Evidenced based practice

Glasgow algorithm
Best Practice for Rural cardiac reperfusion

- Not really a new idea
- Thrombolysis has long been recognised as the best cardiac reperfusion strategy after Primary Cardiac Intervention (PCI)
- Widely used in the United Kingdom, Europe and North America
- Consists of two strategies PAPA and PHT
- Pre-Hospital Thrombolysis (PHT)
- PHT when there is no access to CCL
- Pre-Hospital Assessment of Primary Angioplasty (PAPA)
- Blended approach PAPA / PHT
All front line ambulances to have 12 lead ECG
Approximately 1200 LP15 machines
Transmission capability
Paramedics trained in 12 lead ECG
Process for drug management
Consent and capacity
Clinical governance
Project Team

- Cardiac Project Manager
- Cardiac Project Officer
- Cardiac Educators

Support:
- I.T Support personnel
- Epidemiologist
Program supported by two dynamic and dedicated educators

Who deliver training regionally and provide “real time” clinical support in an often challenging implementation environment
All qualified paramedics receive:

- ECG Infarct pattern recognition
- Cardiac physiology and electrophysiology
- Consent and capacity, including written consent
- Cardiology interface
- Tenecteplase, Clopidogrel, Enoxaparin administration
- Destination decision, handover, documentation
Proof of Concept

- PHT Proof of Concept in HNELHD
- Commenced in July 2008 with 8 communities and 90 paramedics
- Expanded in 2009 to 11 communities to 120 paramedics
- Expanded further in 2011 to 15 communities with 152 paramedics
Proof of Concept

- Evaluation of 100 patients thrombolysed in project area
  - Demonstrated safety and efficacy of pre-hospital Thrombolysis
  - Program established successful relationships and networks
  - Program won several major health and Ambulance awards

*Based on this success in 2010 NSW Health approved the rollout of a Statewide Cardiac Reperfusion Strategy*
PHT is currently implemented in the Hunter, New England, Mid North Coast, Illawarra, Shoalhaven, Southern NSW, Far Western NSW and communities surrounding the ACT.
Encouraging results

- Patients thrombolysed to date: 206
- Median time saved to thrombolysis: 100 minutes
- Median symptom onset to thrombolysis: 95 min
- Median ECG to thrombolysis: 20 minutes
- PHT < 60 minutes from symptom onset: 18.2%
- PHT < 120 minutes from symptom onset: 70.1%
- 30 day cardiac mortality for all PHT cases: 3.8%
- Median Age 63 years, Youngest patient: 27 year
NSW Ambulance is committed to provide improved outcomes for cardiac patients into the future.
Thankyou
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