



Clinical Practice Guidelines: Cardiac/Cardiogenic shock

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Date	April, 2020
Purpose	To ensure consistent management of patients with cardiogenic shock.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
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Author	Clinical Quality & Patient Safety Unit, QAS
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Cardiogenic shock

April, 2020

Cardiogenic shock occurs when there is insufficient blood flow due to dysfunction of the heart. It is characterised by prolonged hypotension with inadequate tissue perfusion in spite of adequate left ventricular filling pressure.^[1]

Up to half the patients admitted to hospital with cardiogenic shock will not survive to discharge.

Significant history may include:^[2,3]

- Pre-existing cardiac disease
- Recent viral infection
- Congenital heart disease (children)

Causes of cardiogenic shock include:

- Acute Myocardial Infarction (AMI)
- Drugs:
 - β -blockers
 - calcium channel blockers
 - some chemotherapy medications
- Electrolyte imbalances:
 - hypocalcaemia
- Structural:
 - ventricular hypertrophy
 - cardiomyopathy
 - aortic stenosis
 - aortic or mitral regurgitation
 - myocarditis/endocarditis

- Other:
 - malignant hypertension
 - catecholamine excess

Clinical features



- AMI
- Chest pain and/or discomfort (described as burning, pressure or tightness)
- Diaphoresis
- Pallor, cold, mottled or cyanotic peripheries
- Altered level of consciousness (ALOC)
- Tachycardia (or occasionally bradycardia)
- Hypotension (SBP less than 90 mmHg)
- Respiratory distress (secondary to cardiogenic pulmonary oedema)
 - tachypnoea
 - hypoxia (SpO₂ less than 95%)
 - wheeze
 - crackles

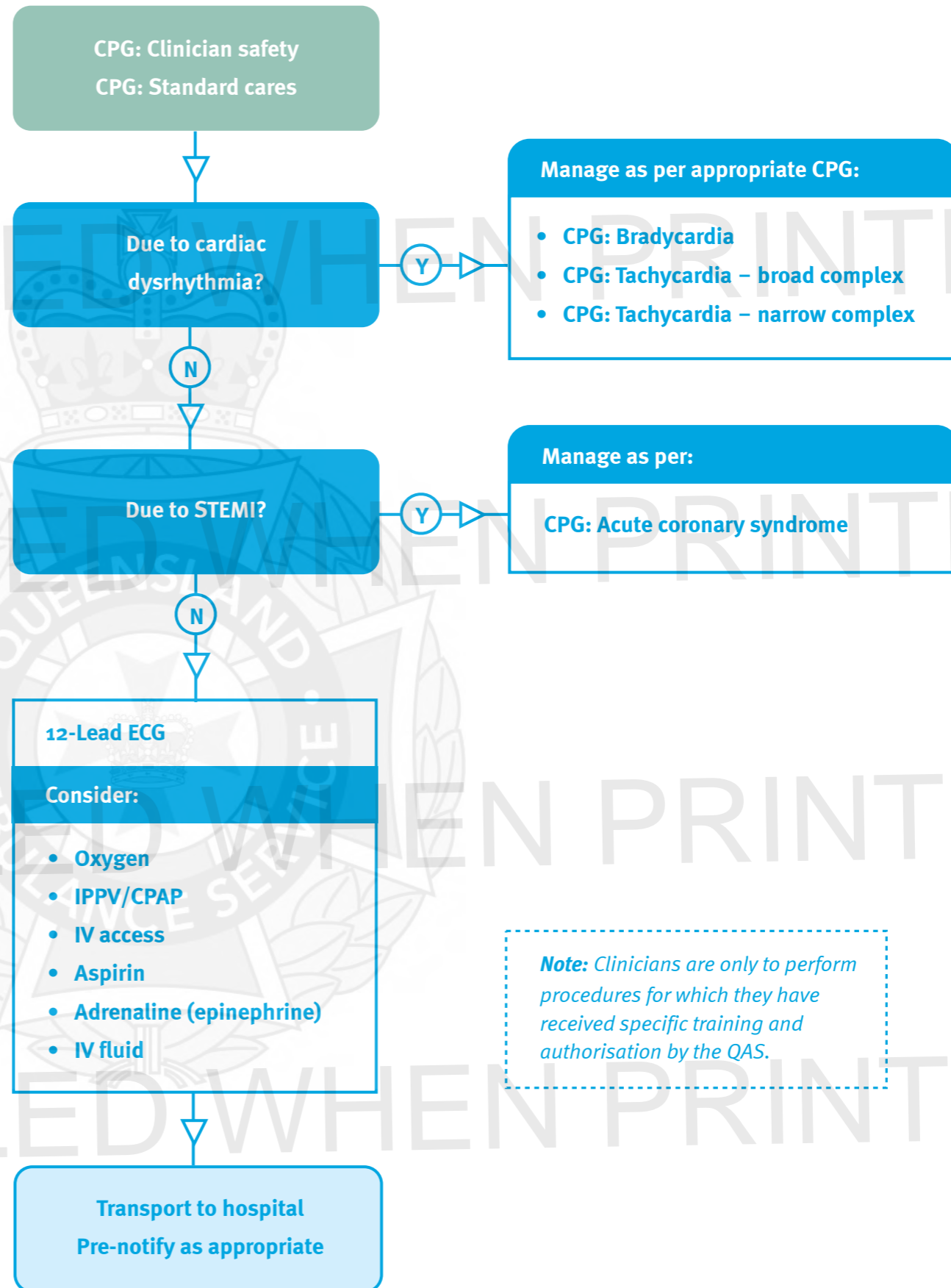
Risk Assessment



- Not applicable

Additional information

- Patient management should focus on ensuring adequate circulatory and respiratory support.
- Judicious fluid boluses may be required to maintain cerebral perfusion.
- Ventilation support with Intermittent positive pressure ventilation (IPPV)/ continuous positive airway pressure (CPAP) may be required in severe pulmonary oedema.
- Adrenaline (epinephrine) may be required to support perfusion in severe cases.
- This risk of developing cardiogenic shock during or following AMI is increases in patients who are:
 - older
 - diabetic
 - have a history of AMI
 - hypotensive



Note: Clinicians are only to perform procedures for which they have received specific training and authorisation by the QAS.