



Clinical Practice Guidelines: Respiratory/Primary embolus

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Date	April, 2016
Purpose	To ensure consistent management of patients with pulmonary embolus.
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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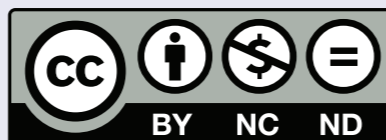
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Pulmonary embolus

April, 2016

Pulmonary embolus (PE) most commonly originates from a deep venous thrombus (DVT) of the lower limbs.^[1] Clinical presentation ranges from asymptomatic to sudden death caused by a massive embolus.^[2]

A significant proportion of patients with PE will present with evidence of DVT, however it should be kept in mind that the condition can be caused by other emboli, such as fat, air and amniotic fluid.^[3]

Cardiac instability is caused by right ventricular failure due to a massive PE with resultant shock.^[1] IV fluid boluses should be administered judiciously (*see flowchart*), as aggressive fluid resuscitation may cause further overstretching of an already expanded and failing right ventricle.^[4]

Clinical features



The clinical features of PE are varied and non-specific.^[5]

Common features:

- Dyspnoea
- Tachypnoea
- Pleuritic, or substernal chest pain
- Syncope or near-syncope.

Clinical features (cont.)



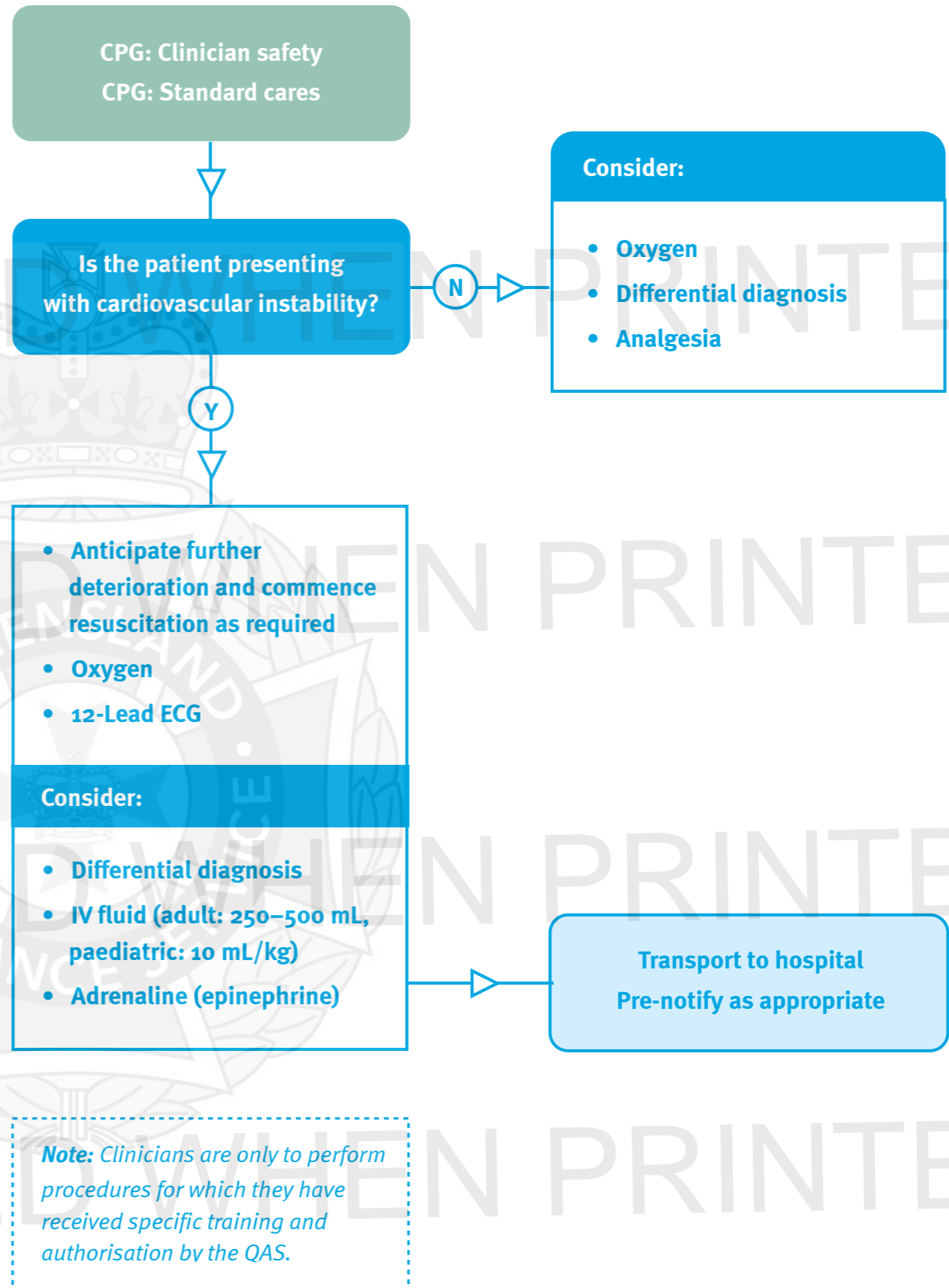
Other features:

- Cough
- Haemoptysis
- Low grade fever > 37.5°C
- Signs of DVT
 - unilateral swelling
 - redness; localised warmth
 - tenderness
 - most often presenting in lower limbs
- Signs of right ventricular dysfunction^[6]
 - S1-Q3-T3
 - right bundle branch block (RBBB)
- Jugular venous distension
- Cyanosis
- Sinus tachycardia
- Shock or hypotension.

Risk assessment



- History of a DVT or PE
- Prolonged immobilisation
- Recent surgery, trauma, or hospitalisation
- Oral contraceptive use
- Hormone replacement therapy
- Cancer
- Pregnancy (the risk is higher during the postpartum period, particularly after a caesarean section).



Differential diagnoses for a PE include:

- AMI
- Pneumonia
- Pericarditis
- CHF
- Pleurisy
- Pneumothorax
- Pericardial tamponade